Incorporating *International Commerce*

NOVEMBER 2, 1970

A UNITED STATES DEPARTMENT OF COMMERCE PUBLICATION

Commerce Today

Coming Developments in Business and Technology

President Nixon Signs Merchant Marine Bill

FROM THE SECRETARY

'New Age Of Reciprocity' Toward Freer Trade

The Department of Commerce plays a major role in implementing the Administration's international trade policies.

These policies represent a continuation and expansion of the Nation's commitment of the past 35 years to the pursuit of freer trade among nations. For example:

- In Europe and the Far East we have taken the initiative to reduce or eliminate the rising number of non-tariff barriers to international commerce.
- In every country where it is appropriate to do so we have pressed for the elimination of restrictions against American imports and American investments.
- We have offered special assistance to help the nations of this hemisphere expand their trade with the United States, and we are seeking to extend tariff preferences to the developing nations.
- We have achieved a very significant liberalization of the Export Administration Act, and have already decontrolled some 1100 items for trade with Eastern Europe.
- After setting the first export goal in history ($50 billion by 1973) we have launched a massive export expansion drive which has already helped stimulate an $8 billion export increase in two years.
- We have also liberalized restrictions on American investments overseas, and look forward to the day when they may be ended.

At the same time, however, we are confronted with many growing concerns in international trade. Our share of exports among the nations of the free world has dropped over the last ten years. Non-tariff barriers are expanding, and we are confronted with a spectrum of tax discriminations, import protections, export subsidies, investment restraints and preferential trading agreements, all of which severely jeopardize our competitive position in world trade.

Notwithstanding these problems, we seek to widen the doors to trade and to open a new age of reciprocity. We seek fairer, more reciprocal trade conditions with our friends and partners around the world.

We seek freer trade in which we are not discriminated against in world markets, but trade in which we are able to compete on an equitable basis.

In short, we seek realistic trade policies—policies which must take into account the attitude of others, and must not ignore our own self-interest.

At home, we must achieve better mechanisms and techniques for U.S. business and labor to adjust to the impact of trade changes. We must expand credit facilities and provide better tax treatment for exports.

Abroad, we reaffirm our own commitment to improve the flow of international commerce, and we seek nothing more than full reciprocity. This includes fairer application of the rules of the GATT, reductions of non-tariff barriers, and liberal attitudes toward freedom of investment.

Freer trade is possible to achieve on the basis of fairer trade.

In exchange for fairer trade, the United States can help achieve for the world a condition of trust and interdependence among men and among nations which will benefit all who live and trade together on this earth.

Maurice H. Stans

Commerce Today

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Vol. I, No. 2, November 2, 1970

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COVER—*On October 21, 1970, President Nixon signed into law the Maritime Bill embodying the ten-year program for revitalizing the American Merchant Marine. Those attending the White House event included (from left to right, front row): Under Secretary Rocco C. Siciliano, Secretary Maurice H. Stans, Assistant Secretary for Maritime Affairs Andrew E. Gibson, Federal Maritime Commission Chairman Mrs. Helen D. Bentley, and Secretary of Transportation John A. Volpe. See story, Page 23.*

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ECONOMIC
HIGHLIGHTS

GNP Advances Moderately In Third Quarter; Home Construction Continues Strong Upbeat

Economic Highlights is prepared by Dr. Harold C. Passer, Assistant Secretary for Economic Affairs, and is based on the latest economic indicators (see charts on adjoining page).

The increase in U.S. Gross National Product in the third quarter, after adjustment for price increases, was significantly higher than the slight advance registered in the April-June period. GNP advanced at an annual rate of about 1.4 percent, compared with 0.6 percent in the second quarter—and the increase would have been about 2.5 percent if the automobile strike had not curtailed production in that industry in the last two weeks of the quarter.

Measured in current prices, the value of all goods and services produced reached an annual rate of $985 billion in the third quarter, a gain of $14 billion, compared with the second-quarter advance of $11½ billion. Strength was evident in residential construction, capital equipment, and in outlays by state and local governments.

Personal consumption expenditures scored only a modest advance, reflecting continued sluggish sales of automobiles and other durable goods. With personal income continuing to rise, the saving rate moved still higher in the third quarter, from 7.5 to 7.6 percent. This unusual rate of saving, the highest in two-and-a-half years, is adding to the reservoir of consumer buying power.

The effects of the auto strike were even more apparent in data on industrial production for September. The Federal Reserve Board's index dropped 1.7 percent from August to September, but about two-thirds of the decline reflected the effects of the strike.

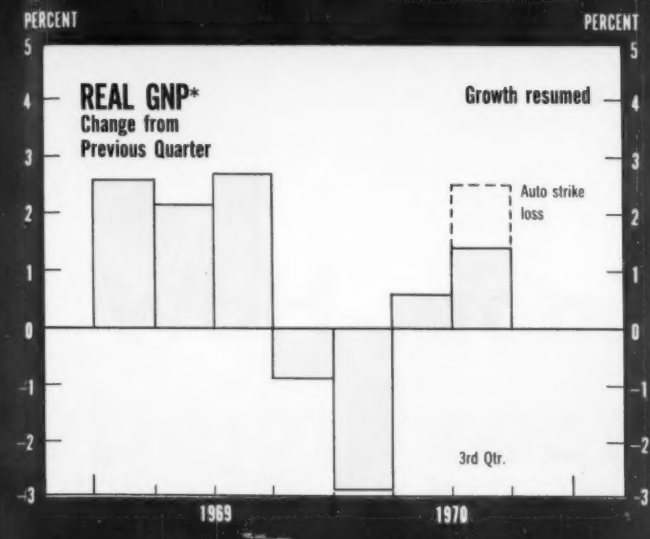
The work stoppage also accounted for most of the drop that occurred in the shipments and orders for durable goods. New orders increased in two important categories not affected by the strike—household durables and producers' capital equipment. The moderate improvement in business equipment orders over the past few months suggests that business plant and equipment spending will be well maintained into the early months of 1971.

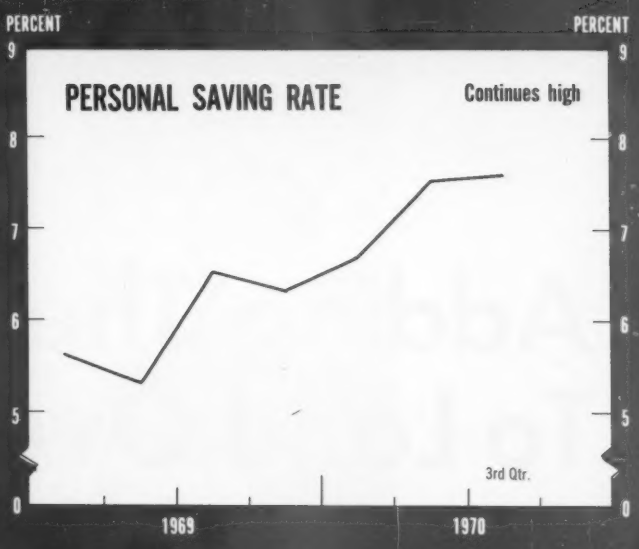
Homebuilding is continuing its impressive recovery. In September, housing starts climbed back to an annual rate of 1.5 million, following a dip in August, while housing permits, a less volatile series, attained their highest level since April 1969.

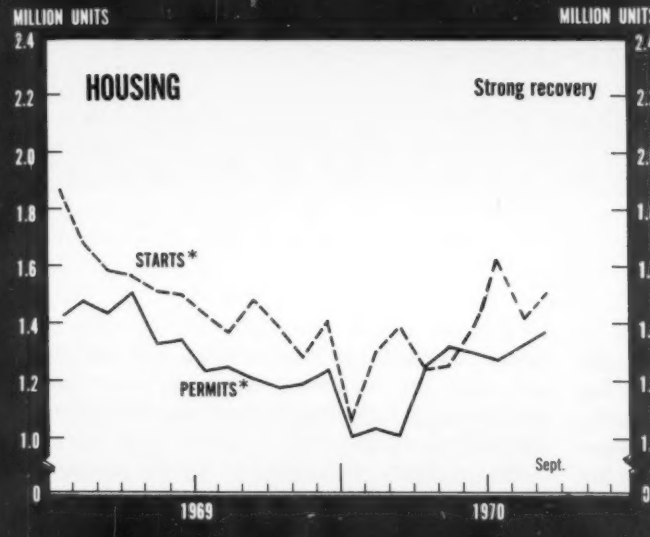
The volume of money flows into savings and loan associations and other financial institutions in recent months augurs well for housing in 1971—especially since much of this inflow has not yet been translated into mortgage loans.

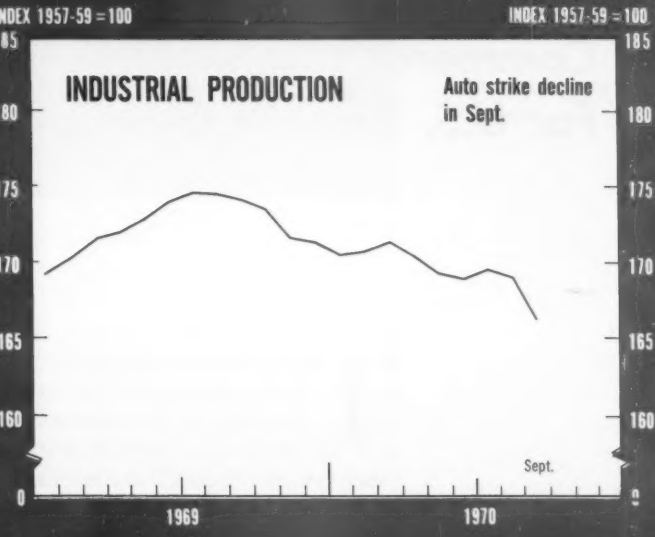
The Consumer Price Index increased 6 percent in September (seasonally adjusted annual rate) after rising 2½ percent in August. Measured on a quarterly pattern, however, the index clearly shows a pronounced lessening in the rate of inflation since the first quarter of 1970.

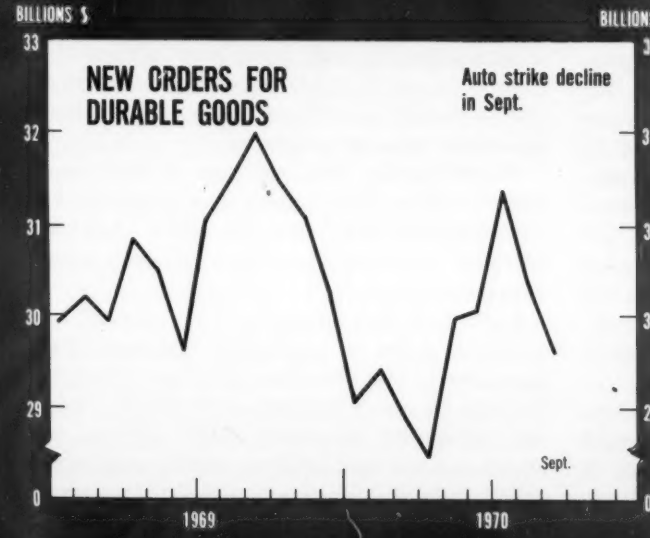
Latest Indicators

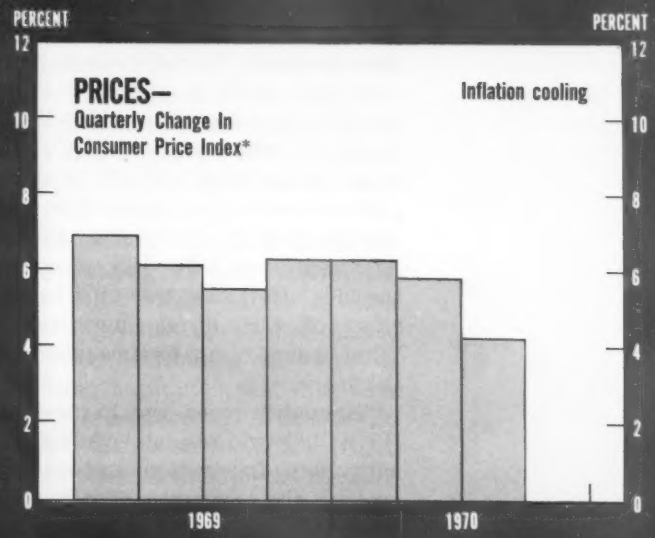












All data seasonally adjusted
*Annual rates

Commerce Today
NOVEMBER 2, 1970
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Adding The Know-How To Land Overseas Projects

Commerce's Specialists Are Pathfinders For U.S. Firms In Governmental Maze

The Project Manager ticked off the question marks. How to meet the rebates of the European competitors? The planned start-up date—how realistic? Shifting renewal time for local wage agreements? Codes and regulations that could bar his new materials and methods? The local design-engineering partner he chose six months ago—how solid now? How to handle the tight scheduling of equipment and parts in and out? And now, the complications from Stateside: Was the Exim credit line still available? Would an export license be required? Would Washington support the project as aiding U.S. foreign commercial policy? Would the untying of the AID requirement for U.S. procurement alter the bids? How to get specific answers on the effect of U.S. direct investment controls? What chance to use local counterpart funds in the financing?

"Enough!" cried the harassed executive. His withdrawal recommendation was greeted with both frustration and relief when it reached the corporate boardroom. And another U.S. company had become an international business dropout—with sad results not only for its own export earnings but for those of important American suppliers linked to its plans.

But a team of specialists in the Department of Commerce is demonstrating to U.S. firms that it doesn't have to be that way. For example, a major project that recently started moving $65 million worth of American equipment and know-how across the Pacific is proof that many of these vexations—particularly those that have Washington roots—can be overcome.

Westinghouse International is the company involved. The Commerce specialists are with the new IBA team—the Office of International Business Assistance. Here's what happened:

Last fall Westinghouse had arrived at a crucial point in negotiations to construct a nuclear power plant for the Korea Electric Co. near Pusan. Total cost of the Ko-Ri Plant was estimated at around $160 million, of which around $65 million would represent dollar earnings for goods and services supplied from U.S. sources. Financing for this

IBA STAFF AT WORK—*David H. Baker (center), director of the Office of International Business Assistance, confers with two of his aides, Strauss S. Leon (left), and Harold O. Fredericks.*

portion of the plant was in the process of being arranged through the Export-Import Bank.

The Korea Electric Co. had arranged to cover most of the remaining costs from its own resources or from other foreign borrowings, but told Westinghouse that the deal would depend on that company's ability to come up with a source of funds for some $5 million in local construction costs. Inasmuch as Eximbank funds were not available for this purpose, Westinghouse International's president asked Commerce for assistance in locating an additional financing source.

Secretary Stans turned the request over to the international business assistance service that he had just set up.

Going straight to the Washington agency concerned, IBA determined that local currency deposits generated by past U.S. economic aid to Korea were available for electric power development projects. A series of negotiations ensued between Westinghouse, the Agency for International Development (AID), and AID's Mission to Korea which is under the general direction of the U.S. Ambassador. IBA assisted Westinghouse in presenting its case to AID, and arranged to have the Ambassador alerted as to the importance of a U.S. firm getting the contract for Korea's first nuclear power plant, to reinforce opportunities for future major nuclear projects which U.S. suppliers saw needed elsewhere in the Far East area.

A $5 million loan from AID's local currency counterpart funds was ultimately approved, providing an important contribution to Westinghouse's success in getting the Ko-Ri nuclear power plant contract, signed last month in the face of stiff foreign competition.

The Westinghouse example involves details that are publicly known, so that the full story can be told. Many of the 42 other cases in which IBA has up to now played a part, with nearly $1.5 billion export potential, are still being negotiated, and thus have confidential business aspects. A second instance, however, that is on the public record in most of its details relates to the plans of the Freeport Sulphur Co. to develop a remark-

NUCLEAR PROJECT—*Westinghouse International, bringing U.S. capability in peaceful use of nuclear power to the Far East, supplied reactors for these twin units at Mihama, Japan. Now, with aid from Commerce's International Business Assistance service (IBA), it is at work on the Korea Nuclear Plant.*

ably rich but remotely located source of copper ore in West Irian, Indonesia.

The Freeport project, initiated shortly after Indonesia adopted a new foreign capital investment law in 1967, promises to return substantial dollar earnings to the U.S. over a 13-year period.

Several agencies with control over U.S. export promotion resources were available to assist Freeport in undertaking this project. IBA acted as a focal point to help Freeport secure coordinated action by the various U.S. agencies concerned. Among the governmental activities involved were: Export-Import Bank's financial facilities, AID's loan guarantee program, approvals by Commerce Department's Office of Foreign Direct Investment, and political-economic assessments by the State Department.

With the help of this combined interagency effort, the Freeport project is now under way. Its construction will entail the export of $60 million worth of equipment and engineering services from the United States. Equally important is the fact that Freeport's project will significantly contribute to overall U.S. commercial relationships with Indonesia.

IBA was established in September, 1969. The Commerce Department was concerned that the internationally-minded U.S. businessman seeking Washington help was having real difficulty finding his way through the maze of official and quasi-official agencies. The IBA role therefore was to give specific help on specific Government-related problems, working with the businessman and the various agencies that touched on his commercial interests.

As can be seen from the Westinghouse and Freeport Sulphur examples, IBA operates through using its good offices to help firms reach policy level officials of whatever agencies may affect their transaction, suggesting alternate approaches, and assuring that the

U.S. ENGINEERS AT WORK—*High in the mountainous West Irian section of Indonesia is the Ertsberg copper deposit, remarkably rich but a problem to Freeport Sulphur engineers opening an access route to it. IBA aided the project.*

TRACTORS BROUGHT IN BY AIR—*Assembled in the mountains, these vehicles help build road to Ertsberg copper deposit.*

MAIN STREET AT CAMP—*Freeport's engineers and crew use this port camp of Amamapare to supply copper project.*

agencies concerned are aware of the export impact of their actions.

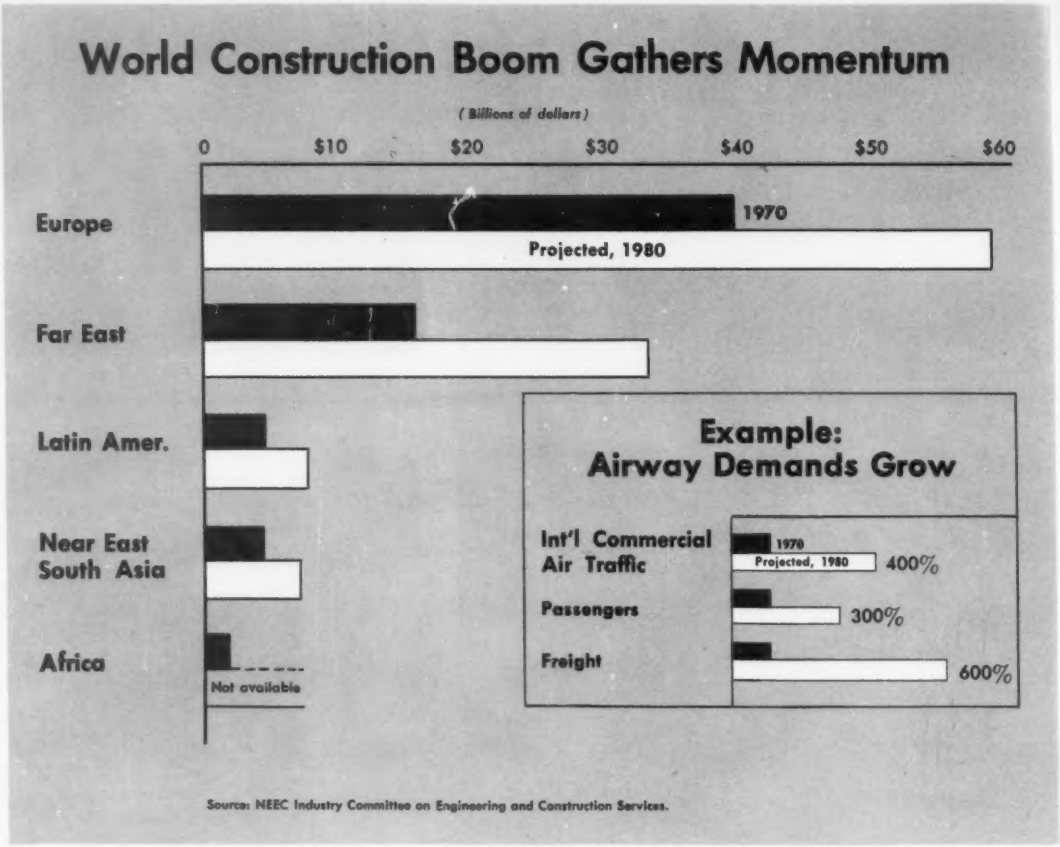
The IBA staff is well aware of the large number of government agencies which may have an interest in or control over some part of an export transaction and the time-consuming coordination often required when a firm runs into a problem with one of them.

The IBA staff is led by David H. Baker, a former international vice president of a major U.S. corporation who during his Service career headed all major procurement activities of the U.S. Air Force. The roster also includes Strauss S. Leon, a former Navy officer who handled more than a billion dollars of foreign government procurement in the U.S.; John J. Whalen, international economist with Foreign Service experience, and Harold O. Fredericks, Arthur Boudreau and Thomas H. Macmanus, trade specialists in the civil aviation and electronics fields.

In addition to helping cut red tape at company requests, IBA assures that U.S. firms are alerted to overseas projects and assists them in entering the competition. In these business development activities, IBA depends on the support of other Commerce specialists in industry and commodity areas, and regional and country affairs, all of whom work under the guidance of the Assistant Secretary of Commerce for Domestic and International Business.

With the assistance of the Department of State, IBA's staff then cooperates with other offices of the Commerce Department to identify major upcoming foreign projects such as airports, seaports, railroads, highways, hydro and thermal electric plants, hospitals, hotels, and industrial plants.

The IBA staff then assures that potentially interested firms receive as early notification as possible on such projects. Following notification, IBA assists those firms requiring such assistance in competing for the project.



The current make-up of the IBA staff reflects the special potential in the U.S. supply of engineering and construction services and equipment for overseas airports and air traffic control systems. As shown by the accompanying chart air traffic is expected to quadruple from 1970 to 1980.

Assistance may take the form of mobilizing interagency support for the U.S. industry effort, advising firms of assistance available from such government agencies as AID and Eximbank, and assisting them in contacting appropriate officials of these agencies and about a dozen others that have export promotion resources. In some cases assistance may include help in putting together "package deals" involving the capabilities and resources of several firms (an engineering firm, a construction company, and an equipment manufacturer, for example), one or more banks, and one or more federal agencies.

IBA was set up in response to two concurrent developments—the increasing volume of exports that are tied to specific projects overseas (see graph) and the growing success of competitor countries in developing an industry-government project approach toward third country bidding.

Secretary Stans stated the guiding principle for the IBA staff when he made the first announcement of the new service: "By helping U.S. businessmen on a case-by-case basis we hope to speed the solution of problems faced by our companies in international trade, and to encourage a closer relationship between Government and business."

—Bureau of International Commerce

How To Reach IBA

Multinational companies, exporters, contractors and others who are experiencing Government-related problems in specific major foreign projects or large export transactions are asked to write to the following address:

David H. Baker, Director,
Office of International Business Assistance
BIC-836
U.S. Department of Commerce
Washington, D.C., 20230

Part II

It's A Metric World

Effects of U.K.'s Metric Conversion Program Provide Important Lessons For U.S. Business

If a decision is made by this country to convert to the metric system of measurement as Thomas Jefferson proposed in 1790, the question remains: how difficult will conversion be?

"It won't hurt a bit," according to Lord Ritchie-Calder of Balmashannar, chairman of the United Kingdom's Metrication Board, which is responsible for the conversion in that country. "We are finding that going metric is almost painless—apart from a few twinges when the nerve of sentimentality is touched and we drool over our pint," he says. "Learning metric is simple. It is unlearning imperial that is difficult."

Britain will be converted to the metric system by 1975.

Lord Ritchie-Calder talked about Britain's conversion in an address earlier this year at Commerce's National Bureau of Standards before a group of Congressmen, government officials and industrialists at the invitation of Dr. Lewis M. Branscomb, director of the bureau.

"I find the loyalty of the United States to the old imperial system rather touching," he said, "especially in the Space Age when the calculations and instrumentation needed to get men to the moon are in the scientific number-language of metric. I should love to see the computer calculating the number of barleycorns to the moon and back. . . . The foot was standardized all those centuries ago as 'thirty-six barleycorns taken from the middle of the ear.' But the astronauts, when they come back to earth, splash down in so many fathoms—and the fathom is the length of a Viking's embrace—and so many yards from point zero. The yard, of course, was the distance from the tip of the nose to the outstretched finger of King Edgar, the Anglo-Saxon king a thousand years ago."

In other words, said Lord Ritchie-Calder, the astronauts were gathered up and carried off into quarantine to be debugged, decon-

taminated, debriefed and demetricated so that they could step out into a pound-foot-gallon country.

He finds it "ironical" that "Quincy Adams, who was personally convinced of the virtues of the metric system, should as Secretary of State in 1821 have advised Congress not to adopt it 'because it would be hazardous to deviate from the practice of Great Britain.' I say 'ironical' because the excuse of British industrialists dragging their feet a century later was that they did not want to deviate from the practice of their biggest customer, the United States," he said. "Now that over 53 percent of British trade is with metric countries and that over 90 percent of the peoples of the world have adopted the metric system or are in the process of going over to it, the British industrialists are the pacemakers for conversion. There are still some firms who are a bit nervous about getting out of step with America, but we are over the hill and there is no turning back."

Planning the Change

Lord Ritchie-Calder explains in the following excerpts how Britain's conversion can be expected to affect its people and industry:

"In the nationalized industry sector, substantial progress has been made in planning the change. The Central Electricity Generating Board, for example, has published its program for the changeover, issued a comprehensive metric manual, and organized training programs in conjunction with the Electricity Supply Industry Training Board.

"The construction industry, with an order book of $11.2 billion a year, and involving over one million operatives and 80,000 contracting firms, many of them small and most of them dependent on casual labor, might have seemed an intractable problem. Through the initiative of the leaders of the industry and the positive metric policy of the Ministry of Public Building and Works, the construction industry has become a pace-maker in metrication. To assist on-site labor the Construction Industry Training Board produced a substantial range of program information and of training material . . .

"Productivity Councils have prepared the ground. Chambers of Commerce in all parts of the country have promoted discussion. One of the gratifying discoveries of the Board was to find how matter-of-factly metrication had been examined by the farming organizations, without serious misgivings.

"The pharmaceutical industry and the pharmacists who began planning as far back as 1945, had changed over to the use of metric units by March 1969. Without any fuss or bother, the traditional grains and scruples disappeared. This is an excellent example of the metric go-between. The industry by its packaging and the dispenser handling the prescriptions could make the conversion with no trouble to the medical profession or to the public. The ease with which the change has been made is a reflection of the wisdom and thoroughness of the planning which preceded it. To the general public it just appeared to happen . . .

"The decision that the adoption of metric units should be voluntary has certain major consequences. The Government might have declared that after a given day metric units would be the only legal units throughout the economy. Indeed there are some who, when in difficulty about reconciling their programs with those of suppliers and customers, have argued for a statutory 'M-Day' or 'M-Days.' This would destroy the whole voluntary basis of the approach which the Government decided to adopt as the most congenial to the British community, with each sector working out its own program and the Metrication Board fulfilling a central coordinating role. . .

"Apart from the merits of the units themselves, their introduction provides the opportunity and compels each undertaking to examine its structure and methods of operation when planning for the changeover. In manufacturing industry, the application of rationalization and variety reduction techniques

Since the U.S. faces the possibility of conversion from the English to the metric system of measurement,* Commerce Today *publishes this second article of a two-part series which concerns Britain's experience in changing to metric. It is indicative of what metrication could involve on these shores in the retail store, the factory, the school, and throughout the economy. Other nations in the midst of metric conversion programs are Canada, Australia, New Zealand, Pakistan, South Africa, Ghana, Kenya, and the Republic of Ireland. The U.S. is today one of the very few nations in the world still operating on the English foot-pound-gallon system.

lead to a reduction in stockholdings, simplified tooling, faster and easier calculations, and improved designs. The result should be an all-round increase in efficiency and competitive power. Because the units are in accord with most of the rest of the world, this greater efficiency can lead to greater opportunities for expanded sales, notably in increased exports.

"In education, the main benefit is a substantial saving of time and reduction of drudgery through simplified instruction at all levels.

"In other sectors of the economy, such as the retail trade and local government, most of these advantages will also be secured, although they are not always self-evident or so immediate.

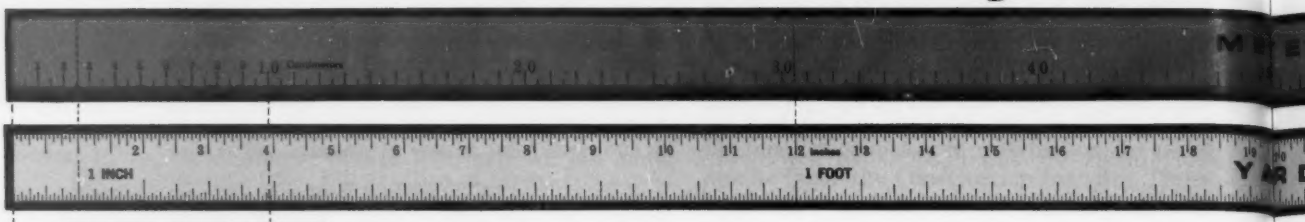
"Throughout the country as a whole there will be a greater simplicity of all calculations because transactions will be conducted in decimal value and metric measure. There will, of course, be a period of familiarization when the imperial and metric systems exist side by side. We believe it is in the best interests of the nation that this period of numerical bilingualism should be kept to a minimum.

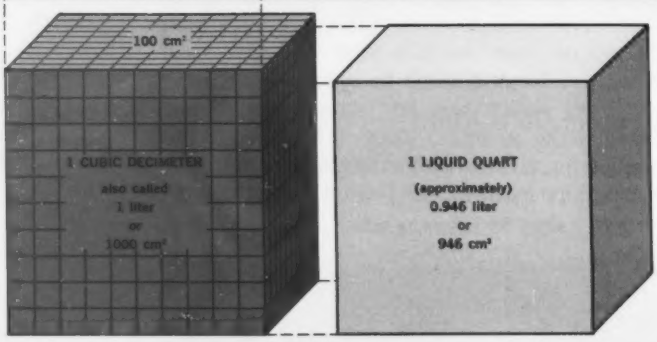
Irresponsible Figures

"Wild unsubstantiated surmises have been made about the costs of Britain going metric.

METRIC PROGRESS—*John Buchanan, Research Officer for The Consumer Council of the United Kingdom, discusses with Faith Prior, Extension Family Economist and Assistant Professor, University of Vermont, his report on Britain's progress in converting to the metric system at a recent National Metric Study Conference concerning consumer affairs at the National Bureau of Standards, Gaithersburg, Md. This particular conference, held in cooperation with the American Home Economics Association, is one of a series being conducted to ascertain the effects of metric conversion should the U.S. decide to convert.*

The Modernized Metric System



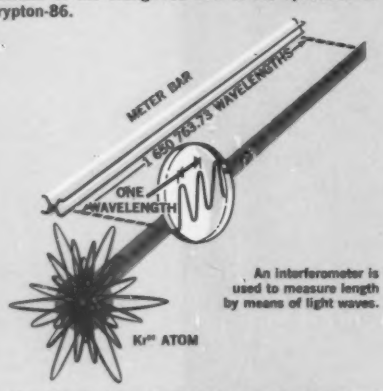


THE International System of Units—officially abbreviated SI—is a modernized version of the metric system. It was established by international agreement to provide a logical and interconnected framework for all measurements in

The Six Base Units of Measurement

Length METER—m

The meter is defined as 1 650 763.73 wavelengths in vacuum of the orange-red line of the spectrum of krypton-86.


METER BAR
1 650 763.73 WAVELENGTHS
ONE WAVELENGTH
An interferometer is used to measure length by means of light waves.
Kr⁸⁶ ATOM

The SI unit of area is the square meter (m²). Land is often measured by the hectare (10 000 square meters, or approximately 2.5 acres).

The SI unit of volume is the cubic meter (m³). Fluid volume is often measured by the liter (0.001 cubic meter).

National Bureau of Standards Special Publication 304 A

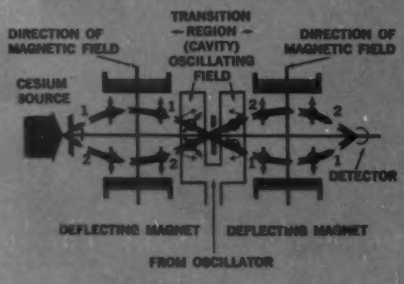
For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 - Price 20 cents

References:

NBS Spec. Publ. 330, International System of Units (in press)
NBS Misc. Publ. 247, Weights and Measures Standards of the United States, A Brief History, 40 cents
NBS Misc. Publ. 286, Units of Weight and Measure, Definitions and Tables of Equivalents, $2.25

Time SECOND—s

The second is defined as the duration of 9 192 631 770 cycles of the radiation associated with a specified transition of the cesium atom. It is realized by tuning an oscillator to the resonance frequency of the cesium atoms as they pass through a system of magnets and a resonant cavity into a detector.



A schematic of an atomic beam spectrometer. The trajectories are drawn for those atoms whose magnetic moments are "flipped" in the transition region.

The number of periods or cycles per second is called frequency. The SI unit for frequency is the hertz (Hz). One hertz equals one cycle per second.

Standard frequencies and correct time are broadcast from NBS stations WWV, WWVB, WWVH, and WWVL, and stations of the U.S. Navy.

Many shortwave receivers pick up WWV on frequencies of 2.5, 5, 10, 15, 20, and 25 megahertz. The standard radio broadcast band extends from 535 to 1605 kilohertz.

Dividing distance by time gives speed. The SI unit for speed is the meter per second (m/s).

Rate of change in speed is called acceleration. The SI unit for acceleration is the meter per second per second (m/s²).

Mass KILOGRAM—kg

The standard for the unit of mass, the kilogram, is a cylinder of platinum-iridium alloy kept by the International Bureau of Weights and Measures at Paris. A duplicate in the custody of the National Bureau of Standards serves as the mass standard for the United States. This is the only base unit still defined by an artifact.

Closely allied to the concept of mass is that of force. The SI unit of force is the newton (N). A force of 1 newton, when applied for 1 second, will give to a 1 kilogram mass a speed of 1 meter per second (an acceleration of 1 meter per second per second).

$$1\,N = \frac{1\,kg \cdot 1\,m}{1\,s^2}$$

One newton equals approximately two tenths of a pound of force.

The weight of an object is the force exerted on it by gravity. Gravity gives a mass a downward acceleration of about 9.8m/s².

The SI unit for work and energy of any kind is the joule (J).

$$1\,J = 1\,N \cdot 1\,m$$

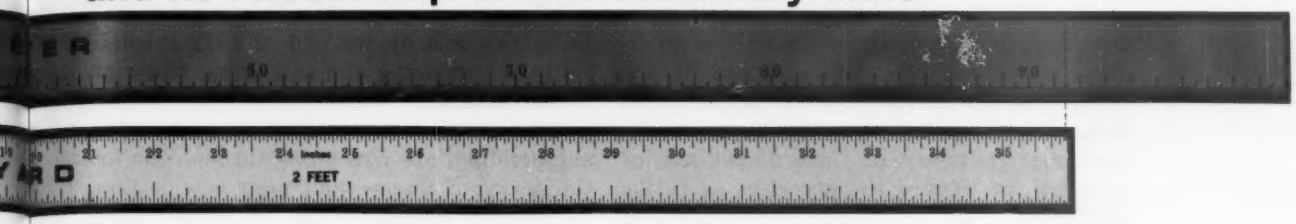
The SI unit for power of any kind is the watt (W).

$$1\,W = \frac{1\,J}{1\,s}$$

A full-scale wall chart, NBS Special Publication 304, is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, for 50 cents.

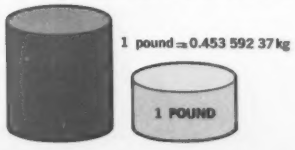
The International System of Units (SI) and its relationship to U.S. customary units

U.S. DEPARTMENT OF COMMERCE
National Bureau of Standards



science, industry, and commerce. SI is built upon a foundation of base units and their definitions, which appear on this chart. All other SI units are derived from these base units. Multiples and submultiples are expressed in a decimal system. Use of metric weights and measures was legalized in the United States in 1866, and our customary units of weights and measures are defined in terms of the meter and the kilogram. The only legal units for electricity and illumination in the United States are SI units.

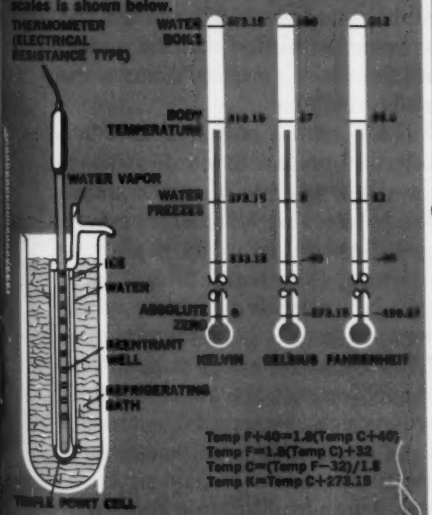
The comparative dimensions of the meter and the yard, the liter and the quart, and the kilogram and the pound are shown.



definitions, abbreviations, and some SI units derived from them

Temperature KELVIN—K

The thermodynamic or Kelvin scale of temperature used in SI has its origin or zero point at absolute zero and has a fixed point at the triple point of water defined as 273.16 kelvins. The Celsius scale is derived from the Kelvin scale. The triple point is defined as 0.01 °C on the Celsius scale, which is approximately 32.02 °F on the Fahrenheit scale. The relationship of the Kelvin, Celsius, and Fahrenheit temperature scales is shown below.

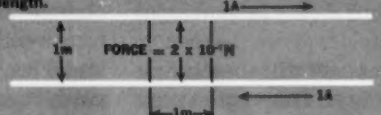


Temp F+40=1.8(Temp C+40)
Temp F=1.8(Temp C)+32
Temp C=(Temp F−32)/1.8
Temp K=Temp C+273.15

The triple point cell, an evacuated glass cylinder filled with pure water, is used to define a known fixed temperature. When the cell is cooled until a mantle of ice forms around the reentrant well, the temperature at the interface of solid, liquid, and vapor is 0.01 °C. Thermometers to be calibrated are placed in the reentrant well.

Electric Current AMPERE—A

The ampere is defined as the magnitude of the current that, when flowing through each of two long parallel wires separated by one meter in free space, results in a force between the two wires (due to their magnetic fields) of 2×10^{-7} newton for each meter of length.



The SI unit of voltage is the volt (V).

$$1V = \frac{1W}{1A}$$

The SI unit of electrical resistance is the ohm (Ω).

$$1\Omega = \frac{1V}{1A}$$

Luminous Intensity CANDELA—cd

The candela is defined as the luminous intensity of 1/600 000 of a square meter of a radiating cavity at the temperature of freezing platinum (2042 K).

The SI unit of light flux is the lumen (lm). A source having an intensity of 1 candela in all directions radiates a light flux of 4π lumens.

A 100-watt light bulb emits about 1700 lumens

COMMON EQUIVALENTS AND CONVERSIONS

Approximate Common Equivalents		Conversions Accurate to Parts Per Million	
1 inch	= 25 millimeters	inches x 25.4*	= millimeters
1 foot	= 0.3 meter	feet x 0.3048*	= meters
1 yard	= 0.9 meter	yards x 0.9144*	= meters
1 mile	= 1.6 kilometers	miles x 1.609 34	= kilometers
1 square inch	= 6.5 sq centimeters	square inches x 6.4516*	= sq centimeters
1 square foot	= 0.09 square meter	square feet x 0.092 903 0	= square meters
1 square yard	= 0.8 square meter	square yards x 0.836 127	= square meters
1 acre	= 0.4 hectare †	acres x 0.404 686	= hectares
1 cubic inch	= 16 cu centimeters	cubic inches x 16.3871	= cu centimeters
1 cubic foot	= 0.03 cubic meter	cubic feet x 0.028 316 8	= cubic meters
1 cubic yard	= 0.8 cubic meter	cubic yards x 0.764 555	= cubic meters
1 quart (liq)	= 1 liter †	quarts (liq) x 0.946 353	= liters
1 gallon	= 0.004 cubic meter	gallons x 0.003 785 41	= cubic meters
1 ounce (avdp)	= 28 grams	ounces (avdp) x 28.3495	= grams
1 pound (avdp)	= 0.45 kilogram	pounds (avdp) x 0.453 592	= kilograms
1 horsepower	= 0.75 kilowatt	horsepower x 0.745 700	= kilowatts
1 millimeter	= 0.04 inch	millimeters x 0.039 370 1	= inches
1 meter	= 3.3 feet	meters x 3.280 84	= feet
1 meter	= 1.1 yards	meters x 1.093 61	= yards
1 kilometer	= 0.6 mile	kilometers x 0.621 371	= miles
1 sq centimeter	= 0.16 square inch	sq centimeters x 0.155 000	= square inches
1 square meter	= 11 square feet	square meters x 10.7639	= square feet
1 square meter	= 1.2 square yards	square meters x 1.195 99	= square yards
1 hectare †	= 2.5 acres	hectares x 2.471 05	= acres
1 cu centimeter	= 0.06 cubic inch	cu centimeters x 0.061 023 7	= cubic inches
1 cubic meter	= 35 cubic feet	cubic meters x 35.3147	= cubic feet
1 cubic meter	= 1.3 cubic yards	cubic meters x 1.307 95	= cubic yards
1 liter	= 1 quart (liq)	liters x 1.056 69	= quarts (liq)
1 cubic meter	= 250 gallons	cubic meters x 264.172	= gallons
1 gram	= 0.035 ounces (avdp)	grams x 0.035 274 0	= ounces (avdp)
1 kilogram	= 2.2 pounds (avdp)	kilograms x 2.204 62	= pounds (avdp)
1 kilowatt	= 1.3 horsepower	kilowatts x 1.341 02	= horsepower

† common term not used in SI

* exact

THESE PREFIXES MAY BE APPLIED TO ALL SI UNITS

Multiples and Submultiples	Prefixes	Symbols
$1\,000\,000\,000\,000 = 10^{12}$	tera (tĕr′ə)	T
$1\,000\,000\,000 = 10^{9}$	giga (jĭ′gə)	G
$1\,000\,000 = 10^{6}$	mega (mĕg′ə)	M *
$1000 = 10^{3}$	kilo (kĭl′ō)	k *
$100 = 10^{2}$	hecto (hĕk′tō)	h
$10 = 10$	deka (dĕk′ə)	da
$0.1 = 10^{-1}$	deci (dĕs′ĭ)	d
$0.01 = 10^{-2}$	centi (sĕn′tĭ)	c *
$0.001 = 10^{-3}$	milli (mĭl′ĭ)	m *
$0.000\,001 = 10^{-6}$	micro (mī′krō)	μ *
$0.000\,000\,001 = 10^{-9}$	nano (năn′ō)	n
$0.000\,000\,000\,001 = 10^{-12}$	pico (pē′kō)	p
$0.000\,000\,000\,000\,001 = 10^{-15}$	femto (fĕm′tō)	f
$0.000\,000\,000\,000\,000\,001 = 10^{-18}$	atto (ăt′tō)	a

*Most commonly used

The Board, with all the experience which it incorporates in its membership, rejects as irresponsible the kind of figures which have been suggested. Indeed, we can find no statistical model on which an estimate of the overall cost to the nation could be calculated and, with the policy already determined by the sober judgment of Government and of industry, we regard the exercises as futile. Similarly, to try to quantify the long-term benefits which will assuredly accrue from increased efficiency and improved competitive power would mean no less than a computation of Britain's role henceforth in world economy. Eschewing such vanity, the Board would say, per contra, that, if the decision to change had not been made, we should be imposing on ourselves an avoidable economic handicap in the years ahead when we shall have to earn our living in a world which will be substantially metric...

"During 1970 substantial progress will be made in many sectors of the economy. The British Standards Institution expects that all important standards relating to construction, industrial materials, engineering components and equipment will be available. This is an essential stage to an orderly advance within these sectors. In education too substantial progress can already be foreseen, the change to metric in examinations being a powerful stimulus.

"Freight transport has set the beginning of 1972 as the target date. The road speed levels will be in kilometers per hour in 1973, and prior to that a beginning will be made in erecting new road signs incorporating distances in kilometers.

"The measurement of land in metric will begin in 1970, with dual dimensioning in preparation for the full changeover in 1971 when land measurement will be wholly metric. Forestry will take a further year to achieve the complete changeover. Farming as a whole seems likely to begin to go metric in 1972, a change which should be substantially completed in 1973.

"Vital industrial supplies such as aluminum, lead, copper, zinc, steel bars, flat steel products, wire mesh and electric cables will be available in 1970 to metric specifications. The production of plastics materials will be in metric terms by the end of 1971, while trade in chemicals in metric units will begin in that year and the changeover will be completed by the beginning of 1973. During 1970 the paper, board and printing industries will complete the changeover to metric.

"Broadly speaking, therefore, the materials industries will by the end of 1972 substantially be producing and marketing materials in metric terms.

"The engineering industries, including shipbuilding, are now going through the initial period of change, and many new designs, particularly equipment for the Armed Services, will be in metric terms from the beginning of 1970. Generally, government procurement policy is to give preference to metric supplies. In 1971 the pace will quicken. The shipbuilding industry will be substantially metric by the end of 1972, while in the engineering industry major changes will be evident by about the same time. There is, however, no simple pattern embracing changes in these diverse industries, and the nature of the change and its timing will vary widely from one sector to another.

Metric Designs

"The construction industry will continue its progress towards metrication and all new designs from now on should be in metric dimensions. Bricks, paving flags, fiber boards, concrete pipes and metal windows are now becoming available from stock. The change to metric measures for softwood, hardwood, plywood and sheet materials is under way, and by the end of 1970 cement and ready mixed concrete will be sold in metric quantities and flat glass to metric dimensions will be generally available.

"During 1970/71 there will not be much that the public will notice. Some do-it-yourself materials will be on sale in metric quantities, notably paints and timber. The bedding industry will go metric in the beginning of 1971, and some synthetic and woolen fibers will then be available in metric quantities. Footwear sizing is to be in metric units in the fall of 1972, and generally it is at that time that we would expect the general public to become increasingly aware of the change in the shops. Of particular significance will be the change in the units of sale of beer, milk and petrol. Another noticeable stage will be when changes in the Weights and Measures Act become effective. It will not, however, be possible to organize the changeover in the retail trade on one single M-Day, and the changeover will be progressive.

—National Bureau of Standards

Input-Output Analysis System Comes Of Age

New Computer Tool For Business

Top management's need for an insight into tomorrow—a telescopic view of the economic future and its relationship to individual business operations—has propelled to popularity a system of economic analysis called input-output.

—North American Rockwell, seeking diversification, particularly in the commercial products area, used the input-output technique to glean a list of choice acquisition candidates with favorable sales forecasts.

—Glass Container Corp. used an input-output model as a part of a procedure for projecting sales quotas and market penetration in each of its sales territories.

— Western Electric through its input-output model was able to spot a shortage of essential construction supplies.

Origin of Name

This latest tool in business research and planning gets its name from the type of data on which it is based. Input is the material requirements; and output is the production of every economic entity in an input-output model.

The change in any industry's production or requirements on all other industries can be measured, theoretically, by questioning the computer after the total industry sales have been programmed into an input-output model.

Some 50 major U.S. corporations now use the input-output analysis technique and it is estimated that several hundred companies will be using it in the mid-'70s to plan business transactions for future decades.

Factors In Prominence

Although input-output analysis was originated in the 1930s by Prof. Wassily Leontief of Harvard, two factors account for its rise to prominence today.

The computer, which revolutionized the handling of masses of data, made the system practical for the first time.

Most important is the new and vastly expanded input-output tables published by the Department of Commerce last fall. The transaction tables, based on the 1963 Economic Census, record the dollar volume of transactions between 370 industrial sectors of the economy. A companion table contains the input coefficients for the same sectors.

COMPUTER SCENE—*Feeding the computer at Commerce are Department employees James Steed and Evelyn Painter. It's computers, such as these, that made the input-output analysis system a practical tool for business.*

These 370 industries encompass all sectors of the economy, such as agriculture, mining, manufacturing, transportation and trade, and provide a vastly expanded view of industry. The new tables contain 140,000 inter-industry relationships compared to the previous 8,000 published in 1964.

During the '70s, the input-output (I/O) analysis system is likely to emerge as a widely used tool of the American businessman in planning future economic development. A number of major firms are already using the computer-oriented system which gives a rational view of the economic future and its relationship to individual business operations.

The Department's Office of Business Economics has published new input-output tables which provide not only a vastly expanded view of the economy but a broad base for use of the input-output technique.

Pioneer Praises Tables

A. C. Gross, manager of marketing for North American Rockwell, a pioneer in the use of input-output analysis, said the Department of Commerce tables represent a significant development in the application of input-output economics.

"Their greater detail and more current data will be used to improve forecasting in every aspect of business planning," Gross says. "The tables themselves are not a forecasting system, but will be used as the basis for future input-output forecasting models."

Use of the 370-industry OBE tables requires that a business have an economics expert capable of developing data relevant to the problems being analyzed. While large

firms can afford specialists of their own, small businesses may work through trade associations and consultants.

Gross foresees formation of a number of consortiums which allow the sponsors to introduce their own assumptions, to ask their own "what if" questions, and play their own games with the consortium model.

"Why shouldn't companies collaborate?" he asks. "Models themselves aren't so valuable that companies should insist on keeping them proprietary. It's what the models tell you after you've introduced your own set of variables that counts."

Seminars Spread Word

To bring the input-output analysis within reach of more and more businesses, OBE and private industry have conducted a number of seminars on the subject in various cities across the country.

Input-output's usefulness is not limited to obtaining diversification data, projecting sales quotas or forecasting availability of essential materials. Depending upon how a user wants to set up his data, the system can be used to project almost any question about a specific business' relationship in the economy of the future.

Varied Uses

It can be used in market research, evaluation of acquisitions and mergers, identification of potential supply bottlenecks, evaluation of the impact of government spending, price analysis, regional economic analysis, gauging the effect of competing materials, and investment planning.

For example, North American Rockwell's input-output model was a key tool employed in giving direction to North American Aviation's acquisition planning prior to the merger with Rockwell-Standard.

"The initial use of the model in formulating a diversification strategy," says Gross, "paid for the cost of its development, and we have continued to make use of the model and improve its utility."

Citing an increase in North American's commercial sales from 26% in 1967 to 40% in 1969 as evidence of the successful use of the business planning tool, Gross says North American expects to make increasing use of the models in refining and extending its market and product analysis, particularly in the highly competitive commercial products area.

Allan H. Young

According to Allan H. Young, an economist and I/O expert in the Office of Business Economics, a firm can place itself in the national input-output tables and see not only how it relates to its own industry but also how it is linked to other industries and to final demand.

Based on the 140,000 interindustry relationships developed by OBE from the 1963 Economic Census data, Young has traced the direct and total requirements for 1 million housing units. The data are shown by type of housing for 10 manufacturing industries with the largest sales to the construction industry.

Keep in mind that the cost of building a single family home is about one-third higher than the cost of a comparable high-rise unit and triple the cost of a mobile home, as illustrated:

COST OF CONSTRUCTION PER HOUSING UNITS IN 1963

	Single family	High rise	Mobile homes
Cost of materials	$ 9,403	$ 7,026	$3,420
Value Added	5,685	4,615	1,123
Total	15,088	11,641	4,543

Material requirements vary widely by type of housing. While single-family houses draw mostly on wood products industries, high rise construction relies mostly on metal. Surprisingly enough, the materials bill for mobile homes is headed by two wood products industries. (See Table 1)

The unique contribution of input-ouput analysis is best shown in the determination of total sales—direct sales to construction, plus sales to other industries generated indirectly by construction demand.

The 10 top suppliers for single-family construction shape up when total sales are considered as indicated in Table 2.

TABLE 1
Direct Requirements from Manufacturing Industries Per 1 Million Housing Units
(Millions of dollars)

SINGLE-FAMILY HOUSES

1. Millwork	544
2. Ready-mixed concrete	509
3. Sawmills, planing mills	485
4. Prefabricated wood structures	317
5. Veneer and plywood	304
6. Metal doors, sash, trim	268
7. Blast furnaces, basic steel products	221
8. Concrete products, n.e.c.	209
9. Forest, greenhouse, nursery products	185
10. Heating equipment, except electrical	178

HIGH-RISE UNITS

1. Ready-mixed concrete	550
2. Metal doors, sash, trim	498
3. Sheet metal work	293
4. Miscellaneous metal work	264
5. Blast furnaces, basic steel products	176
6. Architectural metal work	153
7. Wiring devices	152
8. Gypsum products	149
9. Elevators	145
10. Pipe, valves, fittings	120

MOBILE HOMES

1. Veneer and plywood	268
2. Millwork	206
3. Motor vehicles and parts	202
4. Aluminum rolling, drawing	194
5. Heating equipment, except electrical	144
6. Metal doors, sash, trim	141
7. Sawmills, planing mills	112
8. Blast furnaces, basic steel products	107
9. Electric housewares, fans	91
10. Coated fabrics not rubberized	78

TABLE 2
Total Requirements from Manufacturing Industries Per 1 Million Housing Units
(Millions of dollars)

SINGLE-FAMILY HOMES

1. Sawmills, planing mills	939
2. Blast furnaces, basic steel products	658
3. Millwork	566
4. Ready-mixed concrete	541
5. Veneer and plywood	497
6. Logging camps, contractors	435
7. Prefabricated wood structures	323
8. Metal doors, sash, trim	277
9. Cement, hydraulic	249
10. Forest, greenhouse, nursery products	237

HIGH-RISE UNITS

1. Blast furnaces, basic steel products	852
2. Ready-mixed concrete	572
3. Metal doors, sash, trim	527
4. Sheet metal work	319
5. Miscellaneous metal work	282
6. Cement, hydraulic	229
7. Aluminum rolling, drawing	193
8. Stone, clay mining and quarrying	184
9. Elevators	180
10. Petroleum refining	173

MOBILE HOMES

1. Veneer and plywood	355
2. Motor vehicles and parts	327
3. Blast furnaces, basic steel products	315
4. Aluminum rolling, drawing	267
5. Sawmills, planing mills	219
6. Millwork	214
7. Primary aluminum	161
8. Heating equipment, except electrical	152
9. Logging camps, contractors	150
10. Metal doors, sash, trim	146

Note that total sales of sawmills and planing mills are almost double the direct sales. Total sales for the blast furnaces and basic steel products industries are three times the direct sales. Logging camps and contractors have no direct sales, but they placed sixth in total sales because they sell to wood products industries which in turn sell to construction firms. The millwork, ready-mix concrete, and prefabricated wood structures industries made the list on the strength of their direct sales.

Aluminum rolling and drawing mills place in the 10 top suppliers when total sales generated by high-rise construction are considered. That industry's direct sales amounted to about $1 million per 1 million units, a far cry from the $193 million in total sales.

Useful In Tracing Sales

The mobile homes list contains three industries that were not among the leading suppliers for either single-family or high-rise units. They are motor vehicles and parts, primary aluminum, and heating equipment.

I/O is especially useful for tracing sales to individual industries. The tabulation below shows what two specific industries can expect in the way of sales to other industries, given an increase of 1 million housing units. The noncellulosic organic fiber industry would benefit most from an increase in the sales of mobile homes, whereas railroads would benefit the most from single-family construction. This analysis pinpoints just where the increased loads will fall. For example, increased high-rise construction would draw a lot of business for railroads from hauling materials to blast furnaces and concrete plants. An increase in the manufacture of mobile homes would give the railroads a great deal more supplies to haul for the aluminum industry as shown below.

—Office of Business Economics

The Field Offices of the U.S. Department of Commerce can offer information about I/O seminars, and the Office of Business Economics staff in Washington will answer substantive inquiries. This article is based on more comprehensive information in the October issue of the* Survey of Current Business, *another U.S. Department of Commerce publication.

Sales Per 1 Million Housing Units by the Noncellulosic Organic Fiber Industry to Selected Industries (in Millions of Dollars)

	ALL INDUSTRIES	BROAD WOVEN FABRIC MILLS	YARN MILLS	FLOOR COVERINGS	TIRE CORD AND FABRIC	INDUSTRIAL CHEMICALS
Single-family houses	7.2	.9	1.2	1.7	1.2	0.4
High-rise units	11.4	1.0	2.2	5.2	1.3	.3
Mobile homes	16.7	2.7	2.7	4.8	3.7	.2

Sales Per 1 Million Housing Units by Railroads and Related Services to Selected Industries (in Millions of Dollars)

	ALL INDUSTRIES	SAWMILLS, PLANING MILLS	INDUSTRIAL CHEMICALS	READY MIXED CONCRETE	BLAST FURNACES, BASIC STEEL PRODUCTS	ALUMINUM ROLLING, DRAWING
Single-family houses	477.2	12.6	3.3	18.0	20.0	1.2
High-rise units	283.8	2.0	2.5	19.1	26.0	1.8
Mobile homes	128.0	3.4	1.5		11.1	2.9

Another Addition To The Fastest Dry Cargo Fleet

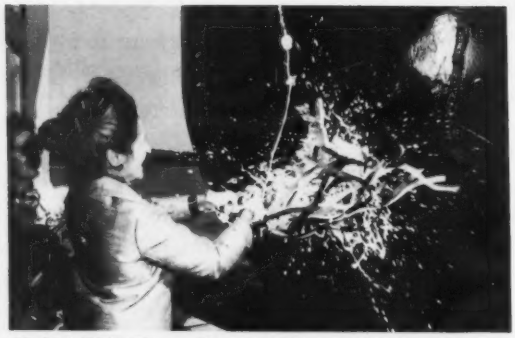
When the second U.S. barge carrying ocean ship, LASH-Turkiye of Prudential-Grace Lines, was launched in New Orleans last month, Commerce Under Secretary Rocco C. Siciliano observed that another important step had been made toward the development of an efficient as well as fast door-to-door cargo delivery service.

"Just as the containership and the roll-on/roll-off vessel introduced improved service to shippers in the form of rapid cargo handling and integrated door-to-door service," he said at the launching ceremonies, "so, too, will the LASH provide a total transportation system which will expedite cargo movements from shippers to consignees."

The 820-foot ship, which costs about $21.3 million, is one of 11 LASH vessels under construction at the Avondale Shipyards in New Orleans. It will be equipped to handle 73 375-ton barges, or 1,500 cargo containers in addition to thousands of tons of liquid bulk cargo. The ship will have the ability to rapidly load and discharge its cargo away from congested terminals, and because of its design, it will be able to serve ports which either lack deep drafts or sophisticated cargo handling equipment.

Current schedules call for delivery of the LASH-Turkiye early next month. The first of this class, LASH-Italia, launched in July, will be ready for service this month.

—Maritime Administration



FROM TURKEY—*Mme. Melih Esenbel, wife of the Turkish Ambassador to the United States and sponsor of the LASH-Turkiye, christens the ship.*

FROM WASHINGTON—*Speaking at the launching ceremonies, Under Secretary of Commerce Rocco C. Siciliano said the LASH will expedite cargo movements from shippers to consignees.*

CHARTING A NEW COURSE—*In a novel side launch, the LASH-Turkiye of Prudential-Grace Lines goes down the ways at Avondale Shipyards, New Orleans, La.*

DOMESTIC BUSINESS REPORT

- Minority business efforts expand
- Mississippi gets 4,200 jobs
- Giant increase in industry employment
- U.S. birthday plans get under way
- 120 million voting age in U.S.

Minority Business Efforts Expand To Key U.S. Cities

The 18th community to join in changing the scene with Commerce's national minority entrepreneurship efforts is Newark, N.J. In Newark—

• Twenty-seven national franchising companies; six oil companies and the four major automobile companies have identified business opportunities in the area and promised their cooperation in making these available to minority group members.

• Two Minority Enterprise Small Business Investment Companies have pledged "seed" capital and assistance to local minority enterprise.

• Six Small Business Administration opportunity programs are being made available for financing minority business.

These and other plans will help Minority Economic Development Industrial and Cultural Enterprises, Inc. (MEDIC), the new Office of Minority Business Enterprise (OMBE) affiliate which officially opened its doors for action last month.

Offering a one-stop service for potential minority business, MEDIC is one of more than 30 such offices, under different names and different organizations, opening in key cities across the country as part of OMBE's efforts to increase the percentage of minority-owned business in the United States.

Besides Newark, affiliates have opened in Atlanta, Baltimore, Boston, Chicago, Dallas, Los Angeles, New York City, San Francisco, Washington, Cincinnati, Cleveland, Indianapolis, Kansas City, Memphis, Philadelphia, Pittsburgh and Richmond. In December, a New Mexico affiliate will bring the number of cities involved to 19, and six more are scheduled to open early next year.

The pattern for MEDIC is cut on a nation-wide scale. Each OMBE affiliate is established with

HELP FOR MINORITY BUSINESS—*Elvin R. Austin, president of MEDIC, newly designated OMBE affiliate in Newark, N.J., receives a check from Secretary Stans as part of Commerce's Economic Development Administration $132,295 one-year commitment. Edwin Smith, MEDIC financial analyst, looks on.*

a local community organization, experienced with minority business problems and dedicated to solving them. Staffed by experts in the business and professional fields, the affiliate office advises and consults with blacks and other minorities interested in owning and developing their own business.

In the Newark office, for example, a minority person seeking to enter the business world is assured complete service. After area opportunities are pinpointed for his new venture, staff experts, familiar with the Federal assistance programs, help him to prepare his resume and the complete package needed to qualify for financial aid. When his financial plan is in order, arrangements are made for contacting the capital sources. When the monies are secured, a complete business plan, with a one year projection, is developed, and technical and management assistance is found for the new entrepreneur. The latter assistance is available to help him on a continuing basis.

A total of 13 professional or business organizations, as well as seven community organizations, in Newark, are helping establish minority business.

Funding for the operation and administration of the affiliate offices comes from Federal, State and local minority assistance monies, as well as capital from the private sector. The Commerce Department's Economic Development Administration, for example, is the primary grantor in the new Newark office, providing $132,295 for the first year, matched by local funds of $44,100.

The OMBE affiliate program is spelling new life to the black and other minority races. Before 1800, Negroes in the United States owned restaurants, taverns, sail manufacturing plants, lumber businesses, insurance companies. Yet, today, blacks—who together with other minority citizens make up slightly less than 17 percent of the U.S. population—own less than 3 percent of its businesses.

—Office of Minority Business Enterprise

EDA Grant Assistance Creates 4200 New Jobs for Mississippi

Sixty miles north of Jackson, Miss., a new plastics plant is being built, opening 60 job opportunities for the area's residents.

The plant in Lexington is one of 481 projects developed over the last three years with the assistance of the Mississippi Research and Development Center at Jackson. As a result of the Center's programs, more than 2,500 new jobs have been created with the help of the U.S. Department of Commerce's Economic Development Administration.

The Center, established by State legislature in 1964, serves State and local agencies, individual businessmen and multi-county Economic Development Districts, by preparing information "packages" for delivery to firms interested in Mississippi and by developing background information required to secure funds for community facilities. The packages inform the potential business of the availability of labor in the area concerned, the cost of land, the cost of construction, expected taxes and the probable market for the firm's product or services.

With an analysis of previous and current project activity, 1,700 additional jobs have been projected for the near future that may include a new barge facility, a manufacturing plant and a catfish processing plant.

These new ventures will entail a related capital investment of approximately $26,556,000. During the last three years, EDA reports a related capital investment of $12,496,000 through the Center's activity.

—Economic Development Administration

Andrew E. Gibson

C. Langhorne Washburn

President Nixon Signs Maritime Bill of 1970, Designed To Restore U.S. Leadership

When President Nixon signed H.R. 15424, the Merchant Marine Act of 1970, he said, "This bill provides the opportunity for American ingenuity, American ability and American enterprise to make America first again in the merchant marine."

The bill expresses the finding that national policy requires the construction of 300 U.S. merchant ships within the next 10 years, and authorizes the necessary appropriation of the funds.

Other major provisions of the bill include: making shipyards eligible for construction subsidies as well as ship operators; providing for a progressive reduction in the present subsidy rates; extending subsidies to bulk carriers; extending tax deferment privileges to all American ship operators engaged in foreign and noncontiguous domestic trade, domestic trade on the Great Lakes and in commercial fishing; creating a Commission on American Shipbuilding; and forgiving payment of interest on the indebtedness of the St. Lawrence Seaway Corporation. In addition, the new law establishes the post of Assistant Secretary of Commerce for Maritime Affairs.

Maritime Administrator, A. E. Gibson, whom the President appointed to the new position, said that with the legislation enacted, "the focus of attention shifts to the industry—shipowners and shipbuilders, management and labor. Congress and the President have demonstrated their convictions that the program go forward. Progress in implementation is being made by the Maritime Administration, and this will continue as rapidly as possible.

"It is now up to the industry," said Gibson, "to carry the program forward to success."

—*Maritime Administration*

International Tourism Gets 'Visa' Extension

President Nixon's signing of PL 91-477 on October 21 marked the first major legislative advance in international tourism since the creation of the United States Travel Service in the Department of Commerce in 1961.

The measure provides for an Assistant Secretary of Commerce for Tourism, a new post to which the President appointed USTS Director C. Langhorne Washburn at the time he signed the law.

The legislation also raises USTS' authorized appropriations ceiling from $4.7 million to $15 million.

Additionally, it establishes a matching grants program which authorizes a Federal investment of up to 50 percent of the cost of approved state, local and non-profit public or private projects to attract foreign visitors or improve reception facilities for them. Initiation of the program depends on a future appropriation by the Congress.

The measure also authorized creation of a 15-member, two-year Presidential Tourism Resources Review Commission to make a full study of the domestic travel needs of U.S. citizens and foreign visitors —and travel resources of the country—through the next decade. The Commission will determine policies and programs which will ensure that travel needs be met, including recommendations for Federal legislation, Federal assistance to the states, and whether a single Federal tourism agency should be designated.

Extends Coverage

Further, the new law extends the U.S. international tourism development program to cover the District of Columbia, Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa and the Trust Territory of the Pacific Islands.

The new legislation, according to Washburn, "should have a tremendous impact on the entire VISIT

USA program. It will permit an extension of our cooperative efforts with Discover America Travel Organizations, state and city tourist and convention bureaus, and this country's private travel industry. Unquestionably, this cooperation has been a key to the successful record of the United States Travel Service."

Washburn became Director of USTS on March 25, 1969. His background in business management includes serving as vice president of the A. C. Nielsen Company, Aptimeter Division, and as president of the Automated Preference Testing Corporation. During World War II he served as a U.S. Naval aviator in the Pacific.

Washburn is presently a member of the board of directors of Discover America Travel Organizations, Inc., the Pacific Area Travel Association, and the Wolf Trap Foundation for the Performing Arts.

—United States Travel Service

Census Bureau Summary Reveals Business Employment Up 34 Percent In 10 Years

Within a ten year period there has been a 34 percent increase in the number of employees working in the private business sector of the U.S. economy.

Service trades chalked up a 72 percent increase, and the finance, insurance, and real estate bracket showed an increase of 40 percent. And for the Nation as a whole, there has been a 101 percent increase in the private business taxable payroll.

These and many other economic comparisons can be made with the data published by the Department today in 1969 County Business Patterns U.S. Summary reports. Because the data are drawn from 3.5 million businesses and industries—which cover almost the entire field of the country's economic activity—they are used to analyze marketing areas, to determine sales quotas, to analyze the industry and business structure of regions, and to make economic studies of small areas. The report excluded railroad employment data.

As to the State-by-State record for the 1959-1969 period covered in the report, Nevada led with a 107 percent increase in employment, followed by Alaska with an 89 percent increase, and Arizona with a 69 percent increase. The first quarter taxable payroll showed an increase of 200 percent for Nevada, 184 for Alaska, and 136 percent for Arizona.

The South Atlantic States, comprising one of the nine Census Bureau Geographic Divisions and including Delaware, Maryland, D.C., Virginia, West Virginia, North Carolina, South Carolina, Georgia, and Florida, topped the Geographic divisions with a 47 percent increase in employment. The metropolitan counties in this Division accounted for 63 percent of its 1970 total employment.

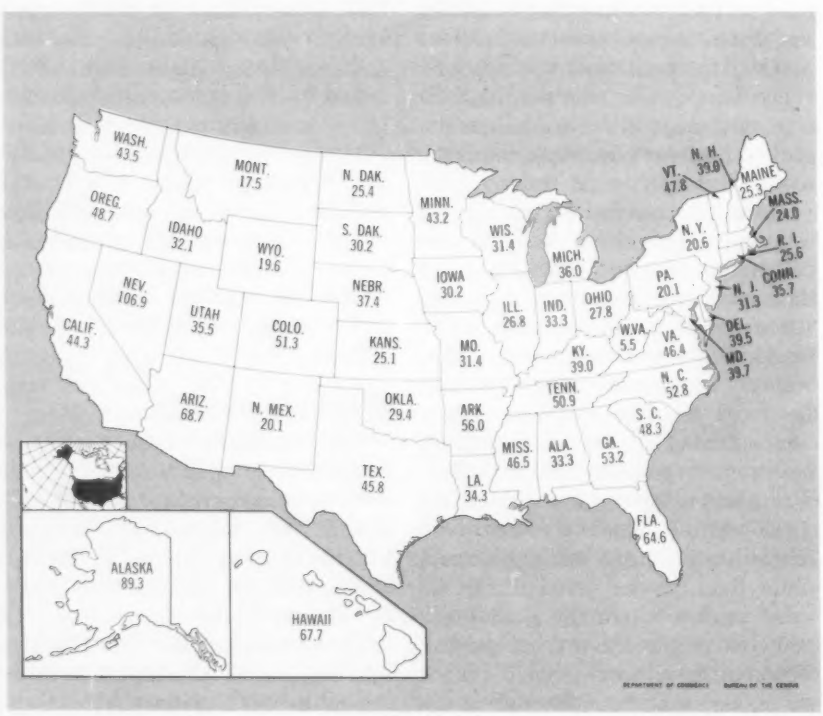
County Business Patterns consists of 53 separate reports: one for each of the 50 states, one for the District of Columbia, one for the regions of Guam, Puerto Rico, American Samoa, and the Virgin Islands, and the U.S. Summary report. Published annually, it is the only publication which provides such data for detailed industry classifications at the county level.

Individual reports or complete sets may be ordered from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 or from field offices of the U.S. Department of Commerce in major cities. Prices for the reports vary from 40 cents to $2.25 depending on the size of the publication. The cost for the complete set of 53 reports is $50.70. State and county data are available on magnetic tape. Inquiries should be addressed to General Economic Statistics Division, Bureau of the Census, Washington, D.C. 20233.

—Census Bureau

PERCENT CHANGE IN EMPLOYMENT, BY STATE 1959-1969

FIRST QUARTER DATA



U.S. Birthday Plans Capture Spirit Of '76

Industry's role in the historical evolution of the nation will be dramatized at an international exposition in Philadelphia, focal point of the United States' 200th birthday celebration in 1976, and in other industrial centers around the nation.

Plans for the yearlong exposition will be presented Jan. 22, 1971 to the Bureau of Internation Expositions located in Paris where all international fairs and expositions receive official recognition.

"The Philadelphia exposition will mirror the mood of the bicentennial observance by placing emphasis on the historical, inspirational, and cultural aspects of our country," says J. William Nelson, director of Commerce's U.S. Expositions staff. "This emphasis will provide the creative genius of American industry an unlimited forum for the story of its contribution to society."

U.S. Expositions, which has the primary Federal responsibility for expositions in the United States, is working closely with the Philadelphia Bicentennial Corporation and the American Revolution Bicentennial Commission, to plan the Philadelphia exposition. The staff's research already has formed the nucleus of the Bicentennial Commission's report and recommendations to President Nixon which he endorsed in September.

The Commission's recommendations set a broad stage for the national anniversary commemoration during 1976. Placing importance upon a national observance in all 50 states and several major cities, the Commission hopes to avoid a commercially oriented world's fair located in only one city.

This broad approach, says Nelson, will allow an industry to participate in an area where it will have the greatest significance. For example, the petroleum industry is constructing a permanent research and development center in Tulsa, Oklahoma. Other U.S. industries as well as international firms are being encouraged to develop comparable centers in appropriate cities where displays, symposia, and scientific research projects could have greater impact.

—U.S. Expositions

J. William Nelson

EDA Funds Four Indian Reservation Projects

Four Indian reservation development projects totaling $2,854,000 in grants and loans have been approved by the Department's Economic Development Administration (EDA).

The Lummi Indian Reservation in Washington, which owns 5,000 acres of tidal lands in Lummi Bay, has received two aquaculture grants. The first, for $1.5 million, has been awarded to the Lummi Business Council, Marietta, Wash., for the establishment of a tidelands fish farm, creating more than 200 job opportunities for the tribe. The EDA funds were approved last month in support of the national program of Commerce's Office of Minority Business Enterprise, and will be used to construct dikes, intake and outlet structures and related facilities for a 750-acre oyster and fish rearing farm. A second EDA grant for $180,000 was awarded to the Lummi Business Council to help continue an extensive research program in aquaculture on which the tribe is basing the tidelands project.

In Alaska, the Metlakatla Indian community on Annette Island will receive a $480,000 grant and a $120,000 loan from EDA to install a new and larger water system which will be used primarily for fire protection. Because of low water pressure and a lack of fire hydrants, the community's high school was destroyed by fire earlier this year.

In its continuing effort to create new job opportunities for the island residents, the Metlakatla tribe has completed a pier and cold-storage plant, and is constructing 30 homes under a mutual-help housing program.

The development of tourist facilities on the Crow Indian Reservation in southern Montana is the reason for a $294,000 grant and a $100,000 loan. The Tribal Recreation Commission, based in Big Horn, Montana, will use the EDA funds to help build a marina with 200 boat slips, a swimming area, and a campground.

The Crow project is being developed under agreement with the National Park Service. The new marina will be near Big Horn Canyon National Monument, site of Custer's last stand. Within a day's drive are Yellowstone National Park and the Grand Tetons. Tourist traffic exceeds 250,000 a season.

The Lummi, Metalakatla, and Crow tribes are eligible for EDA assistance because of low family income and high unemployment.

—Economic Development Administration

1970 U.S. POPULATION OF VOTING AGE AND PERCENT VOTING IN 1966

(Census Bureau Estimates)

	1970 population of voting age	Percent voting in 1966 Congressional election
United States	124,018,000	45.8[1]
Northeastern States	30,804,000	52.0
North Central States	34,146,000	51.2
Southern States	38,007,000	30.4[1]
Western States	21,060,000	55.2

[1] Excludes District of Columbia

U.S. Voting Age Population Totals More Than 124 Million

More than 124 million persons in the United States are old enough to vote on November 3.

In the South, the population of voting age is estimated at 38 million; 34 million in the North Central Region; 31 million in the Northeast; and 21 million in the West. These Census Bureau estimates include all persons 21 years old and over in all but Georgia, Kentucky, Alaska and Hawaii, where either 18, 19 or 20 year olds are able to vote.

California and New York exceed all other States in population of voting age, with 12.2 million and 11.5 million respectively. States with a voting-age population of five million or more include: Pennsylvania (7.5 million), Illinois (6.8 million), Texas (6.6 million), Ohio (6.4 million), and Michigan (5.2 million).

However, all are not eligible to vote. Four million are registered aliens under the Immigration and Naturalization Act, and cannot vote in the U.S. Others, such as persons commited to mental hospitals, penal and other institutions, have been denied the privilege.

The right to vote is nonetheless exercised by a minority of those able to vote. In 1966, a non-Presidential election year, for instance, only 46 percent of the population of voting age cast ballots for members of the Congress. In fact, in only 26 States did even half of the voting age population show up at the polls. Voter participation in 1966 was highest in Wyoming, where 66 percent of the adult population did go to the polls. It was lowest in Texas, where only 21 percent cast ballots.

A small majority does turn out for the Presidential election, evidenced by the 1968 election, when 61 percent of the population of voting age actually took part.

If the Voting Rights Act Amendment of 1970 had been in effect this year, about 10.2 million persons would have been added to the voting-age population. The act, which provides for lowering the voting age for national elections to 18 years in all States, does not go into force until January 1, 1971.

—Census Bureau

43 States Show Rise In Personal Income

An increase in Social Security benefits and a Federal pay boost played a major part in the personal income rise to 2.4 percent in the second quarter. The national increase amounted to 1.5 percent in the first quarter.

In the 43 states where personal income increased, the high gainers were Colorado, Arizona, District of Columbia, Arkansas, Maryland, Mississippi, Idaho, and Kentucky. Seven states reflected a decline: Connecticut, Minnesota, Missouri, Kansas, Wyoming, North Dakota, and South Dakota.

Although there was a decline in farm income in the Plains, large spurts of farm income buoyed personal income in the Rocky Mountain and the Southwest regions. Aerospace cutbacks and the weakness in the lumber industry led to lower manufacturing payrolls in Washington.

—Office of Business Economics

FOR A JOB WELL DONE—*Executive Secretary of the National Association of Television and Radio Announcers, Lucky Cordell (right), of Chicago, Ill., receives a certificate of appreciation from Census Information Officer Samuel Johnson for broadcasting and telecasting public service messages about the 1970 census. The presentation was made at NATRA's 15th annual convention in Houston, Texas.*

Rising U.S. Water Needs Cause Concern

"If a real impact is to be made in solving some of the problems in water supply and water pollution control," says K. L. Kollar, Director, Water Resources and Engineering Services Division, "construction and equipment expenditures for water and wastewater facilities by industry and local governments will have to be increased."

Kollar feels that gross water requirements, based on increased industrial production over the next ten years, will increase 75 percent between 1970 and 1980, more than three times the amount since 1965. It must then be assumed that water equipment sales will have to increase 75 percent just to meet both municipal and industrial requirements.

Municipalities have already begun to reflect higher expenditures for water and wastewater treatment equipment. In 1968, $69.4 million spent for water treatment came from municipal pocketbooks, and $78.3 million for wastewater treatment. This represents a 27.6 percent increase, over a three year period (1965-1968), for municipalities on water supply equipment, and a 46.4 percent increase for the local governments on wastewater disposal.

Industry, while spending fewer dollars on the equipment during the same three year period ($62 million on water treatment and $38.8 million for wastewater equipment), nevertheless, jumped its expenditures 182 percent (118 percent for water supply equipment; 64 percent for wastewater equipment).

The sales to industry mirror the increased water recirculation, as well as the increased pollution of the supply. Moreover, the 64 percent increase in pollution control equipment is indicative of the increased pressure by the public to remedy the pollution problems.

K. L. Kollar

"Because of the high cost of construction today," says Kollar, "maintaining the present level of dollars spent for the water equipment will not be sufficient for tomorrow's requirements." He believes that the solution can only be increased funding from whatever sources are available.

—Bureau of Domestic Commerce

Economic Growth Defined In Plain English

Gross National Product and seven other yardsticks used to measure American economic growth, analyze business trends, and plan production volume on a long-term basis are explained in *U.S. Economic Growth*, a publication from the Department of Commerce. The booklet also defines in simplified terms the major role played by the Bureau of Census and other departmental offices in collecting the basic data for these calculations.

U.S. Economic Growth, the fifth in the series "Do You Know Your Economic ABC's?", can be purchased for 30 cents from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

—Census Bureau

Calendar For Businessmen

Nov. 4—Bismarck, N.D.—Census User Conference. For information contact: David Torkelson, Business and Industrial Development Department, State Capitol, Bismarck, N.D. 58501.

Nov. 5—Columbia, Mo.—Census User Conference. For information contact: Dr. Rex Campbell, Department of Rural Sociology, 104 Sociology Building, University of Missouri, Columbia, Mo. 65201.

Nov. 5—Aberdeen, S.D.—Census User Conference. For information contact: Mrs. Audry Anderlie, U.S. Department of Commerce, 306 Federal Building, 110 S. Fourth St., Minneapolis, Minn. 55401.

Nov. 5-6—Toledo, Ohio—Census User Conference. For information contact, Peter Atonna, 600 Libby Owens Ford Building, Toledo, Ohio 43624.

Nov. 6—Pierre, S.D.—Census User Conference. For information contact John Pohlman, State Planning Agency, State Capitol, Pierre, S.D. 57501.

Nov. 6—Seattle—Puget Sound Conference of Governments, King, Pierce, Snohomish and Kitsap counties, at Pier 52, Seattle Ferry Terminal. For information contact Robert Macabee, Seattle, Phone: 206-623-1600.

Nov. 6—Richmond—Virginia Citizens Planning Association meeting, James Madison Building.

Nov. 15-18—Miami Beach—1970 Discover America Pow Wow and Travel Mart. For information contact: Donald N. Martin and Company, 630 5th Ave., Rockefeller Plaza, N.Y., N.Y.

Nov. 23-24 — Harriman, N.Y. — Syracuse University Conference on National Policy for Timber.

Nov. 30—Ft. Eustis, Va.—National Defense Transportation Association meeting.

SCIENCE & TECHNOLOGY REPORT

- Oceanographers seek keys to Caribbean future
- Industrial materials commission to study nation's resources
- Consumer expert considers metric conversion
- NOAA appoints interim officials
- Cleveland field office sponsors workshop

Oceanographers Seek Keys To Caribbean Future

Intensive oceanographic studies currently under way in the Caribbean and Gulf of Mexico by marine scientists of Commerce's National Oceanic and Atmospheric Administration seek to uncover some of the unknowns of those bodies of water which may one day be helpful in predicting hurricanes and controlling pollution.

Based at NOAA's Atlantic Oceanographic and Meteorological Laboratories, Miami, Fla., 30 oceanographers are operating from aboard two NOAA vessels, the DISCOVERER and PEIRCE. Their studies over a five-week period will include currents, geology, fishing and biological problems.

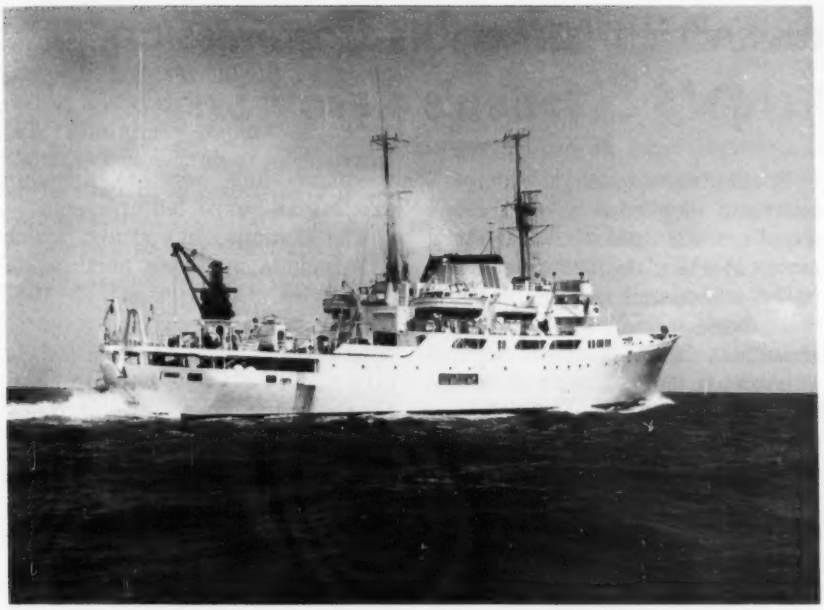
This effort is part of an overall three-year international study known as CICAR (Cooperative Investigation of the Caribbean and Adjacent Regions). Other nations involved include the Soviet Union, Mexico, Cuba, Colombia, Venezuela, England, and the Netherlands.

Collaborating with NOAA in this particular phase of the project are marine scientists aboard the research vessels ISLAND WATERS and TURSIOPS of the Florida Institute of Oceanography at St. Petersburg, Fla., and the ALAMINOS of Texas A. & M. University at College Station, Tex.

"Although the Gulf and Caribbean are very important to this country and the other nations adjacent to them, many aspects of the oceanography of these areas are little known," explained Dr. Donald Hansen, of Miami, an expedition leader.

Dr. Donald Hansen

"The importance of this area becomes more apparent," he continued, "when we realize that approximately two-thirds of the agri-



SCIENTIFIC VOYAGERS—*Oceanographers from Commerce's National Oceanic and Atmospheric Administration (NOAA) are currently making a five-week study of the Caribbean and Gulf of Mexico from aboard these two vessels, the DISCOVERER (top) and the PEIRCE, as part of the international Cooperative Investigation of the Caribbean and Adjacent Regions (CICAR) program. The marine scientists are concerned with currents, geology, fishing and biological problems and information which may be useful in aiding the prediction of hurricanes and pollution.*

cultural and industrial wastes of this nation are carried into the Gulf by the Mississippi River tributary system. This poses the possibility that the area could eventually become a major polluted region. Keep in mind also that one-third of American fisheries come to Gulf ports. One thing we would like to determine is the rate at which Gulf waters and nutrients or pollutants contained therein are exchanged with the open Atlantic."

Hansen said also that the Gulf and Caribbean waters also play a key role in the development of hurricanes. "There is a pretty clear link between sea temperature and hurricane generation," he said, "and there is some thought that the current patterns and related temperatures determine to some extent where the hurricanes will go ashore."

The marine scientists will concentrate on an investigation of the tides and currents in the two bodies of water, determination of their chemical properties and their distribution, their water temperature and salt content, and other marine aspects.

Special attention will be devoted to the Yucatan Current, Florida Current, and Loop Current in an effort to ascertain their role in the circulation of water in the Gulf and Caribbean and the interchange between them and the Atlantic Ocean.

Included among the studies being carried out are measurements of the currents between the Yucatan and Florida Straits with radar-tracked buoys; chemical analyses of deep ocean currents to determine whether they have any special chemical features that would enable oceanographers to trace movement of their waters.

Bottom measurements are being conducted in the Yucatan Channel with current meters which will remain immersed for a month and then rise to the surface for recovery.

"The purpose of this experiment," he explained, "is to test the physical hypotheses about causes of tides in the Gulf in an effort to determine the means by which tides are generated in the Atlantic and reach the Gulf through the Yucatan and Florida Straits."

The two NOAA ships spearheading this phase of the program are part of a Commerce fleet of oceanographic vessels which carry out ocean surveys and research, hydrographic surveys, current surveys, fisheries investigations and wire drag operations. The Miami-based DISCOVERER, an oceanographic floating laboratory, is commanded by Capt. Hubert Keith, Jr. The PEIRCE, a smaller vessel, is based at Norfolk, Va., and com-

manded by Cdr. Bruce I. Williams.

While the ship work is underway, aircraft will fly overhead testing equipment designed to measure sea surface temperature from aircraft and earth satellites.

In an earlier expedition, also a part of CICAR, DISCOVERER's oceanographers probed the bottom and subbottom of the Caribbean around Barbados to trace the extension of structural features found during previous studies.

In recent years efforts have been made to determine whether the Caribbean is tied into the South American land mass or is a separate crustal plate. Scientific investigations in 1968-69 support the conclusion that the Antilles double island arc system (an island arc consisting of both an inner volcanic belt and an outer sedimentary belt) is an offshore extension of the South American continent.

Last month NOAA scientists aboard the OCEANOGRAPHER were seeking new evidence on the development of the Pacific Basin in an investigation of a 400,000-square-mile area of the western Pacific sea floor. Data was sought on the Basin's formation by studying relationships of various ocean bottom features to both old and new crustal plate boundaries.

Global tectonics, an evolution to the theory of sea floor spreading in which the ocean bed is constantly moving, carrying the continents with it (continental drift theory), maintains that the earth's crust comprises rigid blocks or plates that move relative to each other.

Electronic equipment mounted on the OCEANOGRAPHER assisted scientists in determining the direction in which the plates have moved and possibly their age, by measuring the magnetism in their structures.

This project was conducted in an area about 2,000 miles northwest of Hawaii, extending to within approximately 800 miles of Siberia's Kamchatka Peninsula.

—NOAA

Industrial Materials Commission To Study Nation's Resources

Facing increased world competition and dependence on foreign suppliers for essential industrial raw materials, the U.S. has established a National Industrial Materials Commission. The new organization will study American requirements, sources and available supplies for these materials between now and the year 2000.

Announcing the Commission at the recent American Mining Congress Convention in Denver, Secretary Stans said that "shortages of key raw materials inevitably will lead at least to higher prices for the consumers. Beyond that, shortages will jeopardize our capacity to produce goods for export, or they can put us at severe disadvantage in our own domestic markets. Above all, shortages can lead to weakening our national security."

Jointly sponsored and funded by the Department of Commerce and Interior, the Commission will inventory domestic and world resources for metal and mineral materials. Not covered by the study are the energy sources coal, gas, oil and uranium, which currently are under study by another commission.

This study, said Stans "will define our needs and our competition at a time when the world's rapid growth in population places an unprecedented premium on the limited resources of this planet."

Investigations for the major raw materials will encompass: developing supply and demand projections to the year 2000; studying related environmental problem areas; evaluating current and anticipated supply problems including potential economic effects of the problems; identifying locations and problems of sourcing; analyzing effects of Government and industry policies and practices, and recommending ways to alleviate existing and expected problems.

The Commission's study, which will include updating portions of the Paley Commission of 1952 which analyzed U.S. resource needs until 1975, is expected to take more than a year to complete. Membership on the Commission will be drawn from Government and industry.

NOAA Reports Cane Burning May Encourage Drought

The practice of burning cane fields in South Florida and the West Indies may encourage droughts, a Commerce Department scientist maintains. And, once a drought has begun, natural fires which spring up from parched vegetation may actually prolong the drought.

"Smoke, soot, and other cloud condensation nuclei, created and carried aloft by fire, may overseed clouds and prevent natural rainfall," says Ronald L. Holle, a meteorologist of the National Oceanic & Atmospheric Administration Experimental Meteorological Laboratory at Miami, Fla.

According to Holle, the water vapor inherent in puffy, tropical cumulus clouds requires a nucleus to condense on. When this condensation occurs, a raindrop is begun, but the water droplet must grow to sufficient size to fall to earth. This is accomplished as more and more of the cloud's water condenses on the initial water droplet. The original condensation nucleus ranges from one-tenth to one micron in diameter.

The nucleus must collect enough water to increase its size to 400 microns—a factor of 400 to 4,000 times larger—before the water droplet will fall to earth. If the

cloud has a tremendous number of condensation nuclei, they will all compete for the available cloud water, and each nucleus can collect only a minimal amount of water. Thus, in a cloud full of nuclei, none of the small droplets will ever reach raindrop size.

Samples of various native Floridian plants were collected and burned under laboratory conditions by NOAA scientists and the cloud condensation nuclei produced were measured. The results were startling. Each gram of vegetation burned produced between one billion and ten billion condensation nuclei. Since there are 454 grams in a pound, the number of nuclei produced per pound is practically an incomprehensible number—454 to 4,540 billion. Slow burning or smoldering produced about twice as many nuclei as fast burning. And algae, a major fuel in drought-stricken Everglades regions, produced twice as many nuclei as the other Florida vegetation.

Florida's droughts begin with naturally reduced rainfall. However, fires then start the cycle of less rainfall, drier vegetation, more fires, and even less rainfall. The extent of fires in recent drought years is greater than in wet years. In 1968, south Florida experienced several dry weeks in late April and early May. These were accompanied by numerous fires.

Cane fields are burned in south Florida, usually between November and April. Flying an airborne cloud condensation nuclei counter through smoke plumes from sugar cane fires could give accurate data on the trajectories of the smoke particles as well as monitoring the degree of moisture in the surrounding clouds. Such information would give meteorologists a chance to accurately assess the role of massive fires in drought situations. Until then, they can say with a degree of certainty only that fires during an established drought do definitely prolong the dry period.

—NOAA

President's Consumer Expert Considers Metric Conversion

"If the United States went metric, a vast educational program would be needed to inform and educate the consumer," Mrs. Virginia H. Knauer, Special Assistant to the President for Consumer Affairs, told a recent National Metric Study Conference (See page 9) considering the impact of a metric system on consumer affairs at the National Bureau of Standards.

As keynote speaker of the conference, Mrs. Knauer pointed out that the impact on the consumer would indeed be "far reaching" but "the specifics of impact is where we enter the realm of the unknown."

A change to metric, she said, "would necessitate an overhaul of most manufacturing systems. Orders for steel, the manufacture of automobiles, road signs, clothes, packaging—all would be affected. This means money," she said. "Who would pay for it, and what would it cost the consumer?

"What would happen to food preparations?", she asked. "Would we cook by weight or by volume? Would there be a metric cup, a metric spoon? What would the housewife have to buy to prepare a meal?

"What would happen to clothing? Now we buy our clothes either by code size, such as a size 12 dress, or by actual measurements. As women know, the present size system depends upon the manufacturer and, thus, there are inconsistencies not only in the U.S., but all over the world.

"What would be the impact on the apparel industry if we went to the metric system?," asked Mrs. Knauer.

Appliance manufacturers would have to employ new engineering methods to produce their products, she added, and what will metric-designed appliances mean to the consumer?

"Health and medical items may also cause concern," she said. "The pharmaceutical industry has been using metric measurements for some time now. But the doctor's instructions are given in customary measurements. Prescriptions may be accompanied by directions to take so many milliliters per day rather than teaspoons. The new measurement also includes a change in the temperature scale. Units of heat would be measured in degrees celsius rather than degrees fahrenheit. Anyone using the new thermometers would have to understand just what that means," Mrs. Knauer pointed out. "A one or two degree change in fahrenheit temperature would not necessarily warrant a call to a doctor. But on a celsius scale, it would."

The effect of metric conversion on labor was considered at a conference at NBS headquarters, Gaithersburg, Md., last week. The final conference in the series is scheduled for November 16-19 at NBS headquarters. That will include groups representing agriculture, mining, transportation, communications and utilities, banking, insurance, real estate, state and local governments and small business associations.

By December, it is expected that the survey phase of the U.S. Metric Study will be completed so that the tremendous amount of data realized from the various questionnaires, surveys and metric conferences can be digested and assembled into a final report of the study.

The final report is to be sent to the Congress next August together with the recommendations of the Secretary of Commerce.

—National Bureau of Standards

NOAA Appoints Interim Officials

Dr. Robert M. White, Acting Administrator of Commerce's newly-created National Oceanic and Atmospheric Administration (NOAA), announced last week the designation of the following officials in the interim organization of the new environmental agency:

Rear Admiral Harley D. Nygren, former Associate Administrator of the Environmental Science Services Administration, has been named Acting Director of the NOAA Corps which replaces the ESSA Commissioned Corps, a uniformed service whose members conduct a wide variety of geophysical missions.

Rear Admiral Don A. Jones, former Director of the ESSA Coast and Geodetic Survey, was named Acting Director of the National Ocean Survey which encompasses the former U.S. Lake Survey and the Coast Survey functions.

Dr. George P. Cressman, former Director of the ESSA Weather Bureau, was designated Director of the National Weather Service.

Philip M. Roedel, former Director of the Bureau of Commercial Fisheries, was designated Director of the National Marine Fisheries Service. This organization encompasses the former Bureau of Commercial Fisheries and Marine Game Fish Research Program.

Dr. Thomas Austin, who was Director of the National Oceanographic Data Center, was named Acting Director of the Environmental Data Service, which includes the Center.

Dr. Wilmot N. Hess, Director of the former ESSA Research Laboratories, becomes director of NOAA's Environmental Research Laboratories.

David S. Johnson, Director of the former ESSA National Environmental Satellite Center, becomes Director of the National Environmental Satellite Service.

Three former ESSA Assistant Administrators have been designated to occupy similar posts in NOAA: Theodore P. Gleiter, Administration and Technical Services; Donald F. Moore, Plans and Programs; and Dr. Richard E. Hallgren, Environmental Systems.

Becomes Special Office

Dr. Robert B. Abel, Director of the Office of Sea Grant Programs, will continue in that post. The Office of Sea Grant will become a special staff office in NOAA.

Gilbert Jaffe remains Director of the National Oceanographic Instrumentation Center.

Captain Virgil Rinehart, U.S. Coast Guard, was designated Director of the National Data Buoy Project Office.

John W. Padan was named Acting Director of the Marine Minerals Technology Center at Tiburon, Calif. He was formerly the Center's Acting Research Director.

Nels E. Johnson, Director of the Office of International Affairs at ESSA; Newton A. Lieurance, Director of the Office of Aviation Affairs at ESSA; and Stanley Eames, Director of the Office of Public Information at ESSA, were named to similar posts in NOAA.

NOAA was formed Oct. 3 in a Presidential reorganization combining the efforts of ESSA with elements of the Interior Department's Bureau of Commercial Fisheries, Marine Game Fish Research Program, and Marine Minerals Technology Center; the National Science Foundation's Sea Grant Program; elements of the Army's U.S. Lake Survey; the Transportation Department's National Data Buoy Project and the Navy's National Oceanographic Data and Instrumentation Centers.

—NOAA

DID YOU KNOW THAT . . .

. . . the 1880 census was the first one taken by special enumerators and not by Federal marshals? But, because the volume of the printed material produced by this census was seven times larger than that of the 1870 census, the final 1880 statistics were not published until 1888.

Survey Finds Service Station Air Pressure Pumps Can Err

Pressure indicators attached to automobile service-station air pumps frequently err but it would be a fairly simple matter to give the motorist more reliable readings, a sample survey conducted by the National Bureau of Standards suggests.

NBS investigators, checking air tower pressure gages at 50 Washington-area service stations, found, for example, that a motorist trying to put 24 pounds per square inch into a tire would in 45 tires out of a hundred actually get 21 p.s.i. or less, or else 27 p.s.i. or more. The basic finding, in brief, was that the motorist using the equipment at these stations had only a 20 percent chance of inflating his tires within plus or minus one psi of the pressure of his choice.

But, since the air towers which were incorrect at one pressure setting were off at four other typical settings by the same amount, NBS experts concluded that a simple periodic calibration at a 28 psi setting, for example, would be sufficient to reduce the standard deviation of the obtained pressure to one-half pound per square inch.

The detailed report may be ordered at 25 cents a copy from the U.S. Government Printing Office, Washington, D.C. 20402, or local U.S. Department of Commerce Field Offices as SD Catalog No. C13.46:512; or from the National Technical Information Service, Operations Division, Springfield, Va. 22151 as TN-512.

—National Bureau of Standards

Cleveland Field Office Cosponsors Neutron Radiography Meeting

Industrial application of neutron radiography was explained to representatives of 50 U.S. firms at two recent all-day workshops in the Columbus, Ohio, laboratories of Battelle Memorial Institute. Sponsors were the Department of Commerce's Cleveland Field Office, Small Business Administration, American Society for Nondestructive Testing, Inc., and Technical and Business Services, Ohio Board of Regents, in cooperation with Battelle-Columbus.

Battelle-Columbus scientists briefed the workshops on their recent activities in the field including the investigation and development of new neutron radiography applications, neutron source optimization, development of neutron imaging techniques and the design of neutron radiography facilities.

Joseph W. Ray, chief, Nuclear Engineering Division of Battelle, led the discussions.

As explained by Battelle scientists and engineers, neutron radiography is seen as an important new tool for imaging and identification of many material combinations in metals which X-rays cannot do. High cost of present neutron sources is expected to be eased by a cheaper man-made radioisotope, Californium-252, now under market analysis by the Atomic Energy Commission.

Through such workshops the Commerce Department provides the business community information on technical developments which can result in higher profit, new products and new processes. A similar Commerce workshop on exotic food processing was held in 1968 when commercial applications of atomic energy in the preparation of irradiated, dehydrated and freeze dried foods was discussed.

It is hoped that future workshops can be planned on technical topics suggested by industry.

—Cleveland Field Office

EXAMINING DISPLAY—*Commerce Department publications displayed at the Workshop on Neutron Radiography at Battelle Memorial Institute's Columbus, Ohio, laboratories are examined by: (left to right) W. Keith Walter, Electro-Mechanical Division, Westinghouse Electric Corporation; William Leysath, Rauland Division, Zenith Corporation; Morris C. Taylor, Columbia Scientific Research Institute; and Thomas J. Radcliffe, Electromechanical Research Center, Republic Steel Corporation.*

Industry, NBS Improve Rubber Quality Test

Better quality control for vulcanized rubber is promised by a recently established National Bureau of Standards collaborative program for rubber testing laboratories. On the basis of a survey conducted by the Bureau and the American Society for Testing and Materials, the new program will include tests for tensile strength, ultimate elongation, and tensile stress; tests of carbon blacks and raw rubbers may be added later.

Under the program, aimed at reducing interlaboratory variability in testing rubber, the Bureau is distributing samples and analyses of test results to participating laboratories. Two standard ASTM sheets of each of two vulcanized rubbers are distributed bimonthly. The subscriber cuts five specimens from each sheet and determines tensile strength, ultimate elongation, and tensile stress at 300 percent elongation in accordance with the ASTM standard (D412) for tension testing of vulcanized rubber.

Subscribers, identified only by code numbers, record their values for each specimen and submit results to NBS, where an analysis of all test results is made for return to the participants before the next distribution of rubber samples. Included are test data, averages, and standard deviations for individual laboratories and for the group as a whole. Each laboratory can readily compare its results with the NBS values and with those of other participating laboratories.

—National Bureau of Standards

NBS Radio Station Moves to Broaden Service in Hawaii

By spring 1971, if funds are available, radio station WWVH, which broadcasts standard time and frequency signals of Commerce's National Bureau of Standards from the Hawaiian Islands, will begin broadcasting from a new site on the island of Kauai. The station has been broadcasting for the past 22 years from the island of Maui.

The Maui site is being eaten away by the sea's erosive action and mountains on both sides interfere with transmission to the north and east where signals are urgently needed. Some of the equipment is old and requires frequent repairs.

Kauai, on the other hand, offers commercially available water and power supplies, good roads and an airport, is free from electro-magnetic interference and provides more space for antenna arrays.

When completed, the new station on Kauai will be able to broadcast with unprecedented reliability time and frequency service to far eastern parts of the world.

Very low frequency signals from WWVL at Fort Collins, Colorado, will control the master clock at the Kauai station. The Fort Collins clock, in turn, is controlled by the atomic clock at the Boulder, Colorado, laboratories of the National Bureau of Standards.

The radio illumination pattern projected by the new station's directional antennas will cover Alaska to the north, New Zealand to the south, and Saigon, Singapore, Hong Kong, and Calcutta.

Service provided by the NBS network of standard frequency stations includes radio frequencies, audio frequencies, musical pitch, time intervals, time signals, Universal Time corrections, radio propagation forecasts, and geophysical alerts.

—*National Bureau of Standards*

Patents Of Special Interest

Recent patents issued by the U.S. Patent Office included:

—**An inventory system for a central computer to keep track of merchandising items in stores or warehouses.** The computer records show how much is still on the shelves and reminds management when to reorder. Besides maintaining inventory, the computer can tabulate sales. Patent No. 3,528,177 was issued to Luther G. Simjian and assigned to General Research Inc., of Greenwich, Conn.

—**A muffler for use inside warehouses and plants to reduce pollution on lift trucks and loaders.** The pollution-reducing muffler is a round copper tube rectangular in shape, lined with a stainless-steel screen and placed a fraction of an inch away from the wall. The device is reputed to have reduced total pollutants to as low as a thousandth of a per cent. Patent No. 3,526,294 was issued to Gust H. Bjork and assigned to Pure Air Mufflers, Inc. of St. Paul, Minn.

—**Special insulated trays for the serving of hot and cold foods for hotels, motels and hospitals.** The insulated plastic tray carries a set of disposable dishes, with covers to hold a complete meal. The dish compartments are insulated with plastic foam at the sides so that the main course will not warm the salad and dessert. Little protection is needed at the bottom as the trays are carted about in stacks with the hot and cold dishes all arranged in the same temperature zone. The trays will keep food hot or cold more than two hours. Patent No. 3,532,247 issued to John A. Bridges, an engineer of Aladdin Industries.

—**A fabric feeder for the feeding of cloth to a sewing machine.** A vacuum pick-up head lifts a single ply from the top of a stack of cloth and transfers it to a conveyor. A stream of air pulls the top piece of cloth upward, and a second stream exerts gentle suction on the side for stabilization. Patent No. 3,531,103 was issued to Richard R. Walter who assigned it to USM Corporation of Boston, Mass. The machine is being used in the garment industry.

Abstracts and drawings of patents are published as they are issued in the Official Gazette of the United States Patent Office, *each Tuesday. About 1,400 patents are issued each week. Copies of the* Official Gazette *may be obtained from the Superintendent of Documents, Government Printing Office.*

Science Calendar

November 16-19 — Gaithersburg, Md.—National Bureau of Standards. Metric Study Conference (Agriculture, Forestry, Fisheries, Mining, Transportation, Communication and Utilities, Banking, Insurance, Real Estate, State and Local Governments, Building Maintenance, Medical Services, Legal Services, Engineering Services, Small Business Associations, Related Professional Societies.

Nov. 30-Dec. 2—Gaithersburg, Md.—National Bureau of Standards, Symposium on the Application of Computers to Environmental Engineering Design. Cosponsor: American Society of Heating, Refrigerating and Air Conditioning Engineers.

May 10-14, 1971 — Gaithersburg, Md.—National Bureau of Standards, Flow—Its Measurement and Control in Science and Industry. Cosponsors: American Institute of Physics, American Society of Mechanical Engineers, Instrument Society of America.

June 16-18, 1971 — Gaithersburg, Md.—National Bureau of Standards, Summer Symposium in Analytical Chemistry. Cosponsor: American Chemical Society.

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International Commerce

- Commerce's export controls eased
- Trade bill testimony reviewed
- Trade trends in four nations
- Untying of AID's procurement detailed

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International Trade Winds

Company News

COMPUTERS—The New City of Milton Keynes, between London and Birmingham, has ordered a Burroughs B-3500 computer to help design and plan its growth from a village with a current population of 151 persons to a major city of 250,000 inhabitants by the early 1990's. The computer by Burroughs Corp. of Detroit will be utilized to design roads and public works facilities, monitor socio-economic trends, keep and update records of land, property and New City's citizens, and create plans encompassing education, health, employment, transportation, and religious, recreational and shopping facilities.

CONSTRUCTION — Combustion Engineering's subsidiary the Lummus Co. of Bloomfield, N.J. will provide design engineering for a $7 million styrene monomer plant for Chubu Chemicals, Inc., Tokyo. The plant, based on a process by the Monsanto Co., is scheduled for completion in late 1971 with startup planned for early 1972. Chubu is a joint venture of Dainippon Ink & Chemicals, Inc., Hitachi Chemical Co.; Koyowa Yuka Co. and Toyo Soda Manufacturing Co. The new plant will be located at Shin-Daikowa Petrochemical Co.'s facilities in Yokkaichi.

ELECTRONICS — General Telephone & Electronics International Inc. of New York has acquired a majority interest in the Rudolph Hopt group of companies, which represents a large West German manufacturer of radio and TV tuners. Headquartered in Rottweil, Germany, the group has plants in France, England and Italy. A new GT&E International subsidiary, Hopt Electronic GmbH, has been formed to consolidate the operations of various companies in the Hopt group. With Hopt's facilities GT&E will expand its capacity for manufacturing home entertainment components and products, and will make available to the Hopt group GT&E's worldwide distributing and marketing facilities.

PHOTOGRAPHIC LABORATORY — The Austin Co., Cleveland-based design, engineering and construction firm, announced that its subsidiary Austin-Sudamerica S.A., has begun construction of a $3 million film-processing laboratory and distribution center for Kodak Argentina S.A.I.C. in Buenos Aires. Under the agreement Austin-Sudamerica provides the plant location, design and engineering services for the project. The complex, scheduled for completion next February, will consist of four structures and an industrial effluent treatment system.

Newsmemo

Note this sales success in the Foreign Trade Opportunity program that is one of the regular features of this magazine: A U.S. firm has won an annual $1 million contract for cigarette paper in response to a Korean Government tender. In this case the tender was brought to the attention of American industry by the Forest Products Division of the Bureau of Domestic Commerce, which also assisted the contract firm in clarifying the specs.

By all means get in the Graphic Arts Equipment show next March at the new U.S. Trade Center in Sydney, executives at A. B. Dick were told by their Australian representative after a first experience at the Center. Comment by the rep: "We would indeed be pleased to participate . . . This thing is so well organized by the U.S. Trade Center staff members, who go to a great deal of trouble to insure that invitations to attend cover a wide range of people with power to purchase, representing large companies and Government departments . . . We have obtained a list of prospects which is giving great encouragement to everyone."

A catalog can be an effective sales tool when it is placed before a potential buyer. As a result of a recent exhibition of catalogs in the industrial plant engineering and maintenance field at the Bangkok U.S. Trade Center, 22 of the exhibiting firms each received ten or more requests for additional sales information. More than 600 Thai businessmen accepted invitations to visit the show.

Going multinational means going local. A survey by the National Foreign Trade Council has found that more than 95 percent of the personnel employed abroad by U.S. international firms are nationals of the country in which they work. American citizens working abroad are part of the remaining 5 percent, which also includes third country nationals.

A three-day colloquium that brought together 15 noted scientists from the U.S., France, the U.K. and Switzerland helped bring a high-level audience to the Analytical Instruments show this fall at the Paris U.S. Trade Center. Sales projections topped $3 million, and three new agents were appointed by the exhibiting firms, with seven other candidates discussing agency linkups at show's end.

NOTE: This column previews or underlines special aspects of world trade developments, with a particular focus on Bureau of International Commerce export and investment promotions. It is not intended to substitute for the detailed reporting and analysis in our regular news columns.

ROMANIAN PRESIDENT AT COMMERCE DEPARTMENT—*Industrialist Henry Ford (right) greets Romanian President Nicolae Ceausescu during a luncheon meeting at the Commerce Department, while Secretary Maurice H. Stans looks on at left. At center are Under Secretary of Commerce Rocco C. Siciliano (rear) and Carl A. Gerstacker of Dow Chemical Co., Chairman of the National Export Expansion Council. Four other U.S. business leaders—Robert B. Anderson, John B. Gates, William H. Franklin and Arthur J. Santry—took part in discussions exploring joint ventures, investment and general improvement of U.S.-Romanian commercial relations.*

U.S. Export Controls Now Eased On 1,100 Products

Export controls on some 1,100 commodities have been eased so far in 1970 as the Commerce Department moves to implement the Export Administration Act of 1969.

The key provision of the new legislation, from the exporter's standpoint, is the requirement for a complete review of control lists. The review to date has resulted in decontrol actions averaging 110 commodities per month, and has been accelerated through broad consultation with firms in the aerospace, machinery, electronics, chemical, and other industries.

Some commodities were made freely available only to Free World destinations. These include many types of machine tools, centrifugal casting machines, electric motors, radio equipment, amplifiers, cathode ray tubes, semiconductor devices, and magnetometers.

The majority of changes, however, were aimed at easing restrictions on trade with Eastern Europe. All East European countries may now receive unrestricted exports of certain chemicals, iron and steel products, cryogenic containers, telephone and telegraph equipment, conveyors, radio and television apparatus, oscilloscopes, chromatographs, laboratory research instruments, and many other items.

Additional commodities in these and other categories were decontrolled for export to Poland, Romania, Hong Kong, and Macao. In this connection, overall U.S. relations with Romania permitted preferential treatment for it among Warsaw Pact nations.

In most of these examples, only specific items within each category were affected, with other items still subject to varying degrees of restriction. The present level of control on any commodity can be determined by consulting the Commodity Control List, a part of the Export Control Regulations.

The new Act, which became effective Jan. 1, encourages U.S. trade with all countries with which the U.S. has trading relations, but also continues most of the basic provisions of the old Export Contral act. A notable change is that the former legislation called for denial of exports that would make "a significant contribution to the military or economic potential" of other nations that would prove detrimental to U.S. national security, but the words "or economic" have been eliminated in the Export Administration Act. This new Act also stresses that foreign availability of comparable commodities must be considered in any control or licensing judgment.

In keeping with the Act's requirement to reduce paperwork, major changes have been made in the validity of licenses and related documents. Most export licenses formerly were valid for six months, and two six month extensions could be requested. Now licenses generally are issued for one year and may be extended for six more months.

On Oct. 22 additional changes were announced. Licenses for exports of technical data will be valid for 24 months instead of the previous 12. Outstanding project and distribution licenses may now be extended for two years instead of one. Supporting documents for the foreign based warehouse procedure will be valid for two years also. At the same time, the requirement for an end-use statement from the importer in support of a license application was dropped for most shipments valued under $1000. The previous value limit was $500.

Changes through July are reviewed in the 92nd Quarterly Report on Export Control (2nd Quarter 1970), available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402, at 45¢ per copy. The Oct. 22 changes are detailed in Export Control Bulletin No. 31, 25¢ per copy at Commerce Field Offices.

Trade Mission To W. Europe Sees Orders At $3 Million

Almost $3 million worth of orders in the next 12 months are anticipated by the firms represented on a U.S. trade mission that returned last month from Europe.

The participants appointed 23 European companies to act as distributors or agents for their products and are negotiating for agreements with more than 50 additional firms.

The 14-day mission, which visited Frankfurt, Zurich, Milan, and Rome, was organized jointly by the Chamber of Commerce of the United States and Trans World Airlines, with the cooperation of the U.S. Department of Commerce. A first for the Chamber, the MarketAir Mission is the third for which TWA has made available to such business groups a block of seats on an inaugural flight. The inaugural portion of this trip was from Rome to New York.

Representing a broad range of products, the three-part mission included U.S. manufacturers of advanced medical equipment; food processing and packaging equipment; and electronic data processing, microfilm, and reprographic equipment.

"Not surprisingly," reported Mission Director Jenkin Lloyd Jones, "those firms in EDP and peripherals elicited the largest number of appointments. In each city visited these individuals were in great demand. Some members from other fields found intense European competition and said they viewed equipment that compares favorably with their own lines." Jones is chairman of the board of the U.S. Chamber and editor and publisher of the *Tulsa Tribune*.

For the most part, the firms represented were not among the largest in their fields. "The majority of the members had little experience in exporting and very few had participated in any previous trade missions," said Jones. "For the majority, the mission lifted away a veil of uncertainty and opened up the true potential for expanding sales through more foreign trade."

Several mission members pointed to specific challenges they are facing in the markets they visited. For example, from the advanced medical equipment group, David Barnow of Beltone Electronics in Chicago reported that the distributors he talked with were not interested in quality if it made a product cost more than a European competitor's. "They readily acknowledged that our quality was superior but they would not pay 10 to 15 percent more for that quality." Barnow said, however, "I did line up some prospects in each country visited, sent samples to several, and have a better understanding of the market and what our European competitors are doing about it."

Norman Frankel, IPCO Hospital Supply Corp., Chicago, reported that although he was assured by a number of laboratory supply houses in Germany and Switzerland of forthcoming orders, he understood that traditionally rather lengthy negotiations are necessary.

Participating in the food processing and packaging machinery group, Paul Girton, Girton Manufacturing Co., Millville, Pa., said he quickly learned that European manufacturers were capably making, and at lower cost, many of the more conventional machines that his company had to offer, but that they were eagerly looking for new "ideas" for import or production under license. A manufacturer of dairy equipment, Girton saw the consolidation of dairy plants now taking place in Central Europe as a deterrent to present sales.

Frank Fairbanks, Jr., Horix

PINPOINTING PROSPECTS—*Mission members Paul Girton (l.) and Frank Fairbanks (c.) of food processing and packaging equipment group, discuss merits of their machinery with customer in Zurich. Page 35, top right picture shows (from r.) members John Stanford and Omar Lennen with U.S. Ambassador Shelby Davis, leader Jones, and Zurich TWA manager A. J. Marville. Left, H. H. Howland (r.) and Jones with Swiss businessmen. Lower left, Commerce's John G. Smith briefs mission.*

Manufacturing Co., Pittsburgh, observed that market prospects for packaging machinery in the countries visited must be regarded as rather limited for most U.S. manufacturers. "With minor exceptions," he says, "European machinery which is completely adequate for customer needs is available. Machinery is generally well built, to metric standards, and service and spare parts are readily available. Prices are usually substantially lower than equivalent American machinery. In some categories, however, American machinery is superior to any in Europe, and such machines can be sold there."

About the EDP market, Charles Bigelow, Jervis B. Webb International Co., Detroit, points out that industry in Europe is "reviewing use of computer programs for industrial processing. Consequently, many software and peripheral manufacturers are focusing their attention on the industrial marketplace. Also, the critical labor shortage throughout Europe will require more and more automatic operations, if industrial expansion is to continue."

W. J. Muldowney, Orbital Systems, Inc., Moorestown, N.J., describes the European market as "several sub-markets" with regional characteristics—such as variations in ways of conducting business, in standards for plugs and insulation on power cables, in taxes and import duties. "We regard the recognition of these regional differences as the first step toward doing an effective marketing job in Europe."

Assisting on the mission and working with Director Jones and 23 business executives were several trade specialists: Donald Musch of the U.S. Chamber's International Group; David Petterson, loan officer, Export-Import Bank; John Smith, Jr., assistant director of the Commerce Department's Trade Missions Division; and Richard Miller, TWA MarketAir Trade Development.

Secretary Leads Commerce Group At NFTC Rostrums

Four high Commerce Department officials, headed by Secretary of Commerce Maurice Stans, will be part of a distinguished Government delegation to the 57th Annual National Foreign Trade Convention in New York Nov. 16-18.

More than 2,000 private businessmen, government officials, foreign diplomats and educators are expected to attend. The convention theme is: "Trade and Investment in a Changing World Economy—The Need for Realistic Policies and New Initiatives."

Secretary Stans, who served as a keynoter in opening last year's meeting will address the World Trade Dinner which concludes the Convention. Also appearing at different sessions will be: Robert McLellan, Assistant Secretary for Domestic and International Business; Andrew E. Gibson, Assistant Secretary for Martime Affairs; and Harold B. Scott, Deputy Assistant Secretary for International Business, who is also Director of the Bureau of International Commerce.

Award to Peterson

The 1970 Captain Robert Dollar Award will be presented to Rudolph A. Peterson, chairman of the Bank of America's Executive Committee and head of the committee that drew up the Peterson Report, which suggested revisions in the U.S. foreign aid program. The award is made annually for distinguished contributions to the advancement of U.S. foreign trade.

President Nixon's Special Representative for Trade Negotiations, Carl J. Gilbert, will serve as keynote speaker at the opening general session Monday morning along with International Harvester president Brooks McCormick.

Luncheon speakers include Prof. Edwin O. Reischauer of Harvard, former U.S. Ambassador to Japan; Jean-Luc Pepin, Canada's Minister of Industry, Trade and Commerce; and Jacques G. Maisonrouge, president of IBM World Trade Corp.

Sessions will cover international finance and international personnel compensation, and Warren W. Glick, Eximbank's Senior Vice President for Financing, will be on the finance panel, with Normand Lizotte, Acting Director of the State Department's Allowances Staff, will take part in the compensation panel.

Participants will attend regional sessions on Latin America and the Pacific Asia. Charles A. Meyer, U.S. Coordinator of the Alliance for Progress, will speak at the Latin American session, and BIC Director Scott will talk at the Asia meeting.

Other regional sessions will cover Europe and Africa, with Assistant Secretary of State for Economic Affairs Philip H. Trezise taking part in the European group and the World Bank's Eastern Africa Department Director Michael L. Lejeune joining the African session.

A final general session will feature the presentation of the Convention Declaration and talks by Assistant Secretary Gibson and Under Secretary of Transportation James M. Beggs.

A tax session will feature Stanford Professor Dan Throop Smith and B. Kenneth Sanden, a partner in Price Waterhouse & Co. The U.S. Trade and Investment Forum will feature Assistant Secretary McLellan; George H. Hildebrand, Deputy Under Secretary of Labor for International Affairs; John R. Petty, Assistant Secretary of the Treasury for International Affairs; and Eximbank Director Tom Lilley.

Progress On Trade Measure Led October Official Actions

This article is another in a series of monthly reports outlining actions in Congress or elsewhere in Government, and by foreign or international bodies, affecting world trade, as noted by the Bureau of International Commerce's Office of International Trade Policy. (Some late October actions will be covered in next report.)

In October, progress of major U.S. trade legislation again captured the spotlight. The month's activities also featured certification of six worker groups and one firm to apply for adjustment assistance and significant Tariff Commission findings on dairy imports and imports of articles assembled or processed abroad from U.S. components or materials.

CONGRESS

Action on the Trade Bill: The Senate Finance Committee tentatively voted Oct. 13 (9-3 with two abstentions) to attach as an amendment to the Social Security bill, a modified version of the Trade Act of 1970 (H.R. 18970), now awaiting floor action in the House of Representatives. The Finance Committee amendment differs from H.R. 18970 in that it excludes those provisions permitting establishment of Domestic International Sales Corporations (DISCs) and authorizing the President to remove American Selling Price (ASP) customs valuation.

This action followed two days of testimony by Administration spokesmen and others. Seven Administration witnesses, including Secretary of Commerce Maurice H. Stans, Secretary of State William P. Rogers, and Special Trade Representative Carl J. Gilbert, testified in support of those provisions of the bill backed by the Administration and expressed certain reservations about some of the provisions added by the House Ways and Means Committee.

These witnesses expressed the belief that the provisions contained in the bill proposed by the Administration in November, 1969, as well as the additional provisions regarding textiles and DISCs, were still sound and more urgently in need of implementation than a year ago (see *International Commerce*, Dec. 1, 1969, May 18, May 25).

With regard to the specific provisions of H.R. 18970 (see *International Commerce*, Sept. 7), Administration witnesses supported those provisions involving: (1) tariff reduction authority and the staging of reductions made under this authority; (2) retaliation and other means for dealing with foreign import restrictions and discriminatory practices; (3) adjustment assistance for firms and workers injured by imports; (4) negotiated orderly marketing arrangements; (5) import quotas on textiles which could be superseded by negotiated agreements; (6) changes in administrative procedures under the antidumping and countervailing duty statutes; (7) an increase in the Tariff Commission membership to seven members; (8) authorization of appropriations for the U.S. share of GATT expenses; (9) amendments to the Automotive Products Trade Act of 1965 regarding eligibility of auto workers for adjustment assistance; (10) certain import quota classifications to be made by the Secretary of Agriculture; (11) trafficking in certain drugs; and (12) repeal of the embargo on certain furs from the Soviet Union, provided certain adjustments are made in the applicable rates of duty.

Administration spokesmen opposed or expressed certain reservations with respect to provisions: (1) requiring the President to use quotas or other measures, but not tariff changes, to adjust imports in national security cases; (2) excessively liberalizing the escape clause criteria and requiring the President to make a national interest determination when he does not accept *in toto* the Tariff Commission's recommendations after an additional determination of market disruption; (3) requiring a "peril point" finding on termination of escape clause actions; (4) increasing the ceiling on allowances for adjustment assistance to workers; (5) establishing import quotas on footwear; (6) applying the rulemaking requirements of the Administrative Procedure Act to certain actions to be taken with respect to textiles; (7) repealing the President's authority to make the determination in case of tie votes by the Tariff Commission in findings respecting restrictions on imports; (8) authorizing elimination of ASP in a manner other than by authorizing the President to proclaim the two agreements concluded as part of the Kennedy Round tariff negotiations; and (9) imposing tariff-quotas and duty increases on glycine and mink skins.

Secretary Stans, during his testimony, described the current trade picture and explained that the basic thrust of the textile provisions supported by the Administration is the negotiation of viable international textile agreements. Secretary Stans also spoke in favor of the Administration's DISC proposal. In answer to a question from Senator Fulbright, Secretary Stans expressed his belief that if the bill as proposed by the Administration were passed, it would not result in retaliation from any other country.

The Senate Committee is sched-

uled to take further action on the proposed legislation when the Senate reconvenes in mid-November.

Other Committee Actions on Trade Legislation: Prior to the Congressional recess, the House Rules Committee ordered reported HR 18884, which contains provisions extending the product coverage of Section 8e of the Agricultural Marketing Act to include olives, raisins and prunes. Section 8e prohibits the importation of any products which do not conform to domestic marketing orders with respect to grade, size and other standards.

Also, the House Ways and Means Committee approved the extension of U.S. participation in the International Coffee Agreement until July, 1971. As introduced by Chairman Mills and Representative Byrnes, the measure would have extended the International Coffee Agreement Act of 1968 until Sept. 30, 1973. The measure has not yet been sent to the full House for further action.

Bills Introduced: When Congress recessed Oct. 14, some 890 trade-related bills had been introduced in this session of Congress. Seven new bills, none of which involved quotas, have been introduced since September. These included four duty suspension bills. In addition to HR 19567 (Mills, Ark., and Byrnes, Wisc.) which would continue the International Coffee Agreement Act, there were: HR 19526 (Mills, Ark.) to eliminate the duty on natural rubber containing fillers, extenders, pigments or rubber processing chemicals; HR 19670 (Fulton, Tenn.) to suspend the duty on certain bicycle parts until Dec. 31, 1973; and HR 19703 (Schneebeli, Penn.) to suspend the duty for certain articles of germanium until Dec. 31, 1972. Other legislation affecting trade included: HR 19600 (St. Germain, R.I.) to amend title 23 U.S.C. regarding use of American materials in the highway construction program; HR 19757 (Stubblefield, Ky.) to provide for the inspection of certain egg products by the Agriculture Department, restrictions on the disposition of certain qualities of eggs, uniformity of standards for eggs in interstate and foreign commerce, and for other purposes; and S 4484 (Stevens, Alaska; Hansen, Wyo.; and Bellmon, Okla.) to amend the Natural Gas Act of 1938 to prohibit importation of Algerian natural gas.

THE PRESIDENT

Bills Signed: On Oct. 21, the President signed into law the Merchant Marine Act of 1970 (PL 91-469). Among reforms in the merchant marine program is a modification of the former "Buy American" provision that required all articles, materials and supplies used in connection with a vessel built with construction-differential subsidy to be, so far as possible, U.S.-made. The new law permits the Secretary of Commerce to waive this requirement when delivery of the ship would be delayed. This waiver authority would not apply to materials used in construction of major components of the hull and superstructure, which must be of domestic origin.

Adjustment Assistance Rulings: By directing the Secretaries of Labor and Commerce, respectively, to certify six groups of workers and one firm as eligible to apply for adjustment assistance under the Trade Expansion Act of 1962, the President resolved seven split-decision votes of the Tariff Commission on pending cases. In each case, the Commission had split 2-2 on the question of import injury (see *International Commerce,* Sept. 7, Aug. 10). The President was advised by the Attorney-General in June that he has the authority to act on the findings of either group of Commissioners to resolve split decisions. Those affected by the action are workers at the following plants: Mishawaka, Ind., plant of Uniroyal, Inc. (2 cases); Watertown, Mass., plant of B. F. Goodrich Footwear Co.; Rock Island, Ill., plant of Servus Rubber Co.; Chicopee and Ludlow, Mass., plants of the F. W. Sickles Division of the General Instrument Corp.; and the Wyoming, Mich., plant of American Motors Corp. The certified firm is Ion Capacitor Corp. of Columbia City, Ind.

Decision on Carpets: As the result of the Tariff Commission's report of June 19 to the President on its investigation of Wilton and velvet carpets and rugs of non-Oriental design (see *International Commerce,* July 13), the Administration has decided that no further action is warranted. The current investigation follows Presidential action terminating the 40 percent escape clause rate and restoring the 21 percent trade agreement rate for Oriental carpets and rugs. At that time, the President extended the escape clause rate of 40 percent for non-Oriental design carpets and rugs and asked the Tariff Commission for additional information to help determine whether any further action was necessary with regard to the tariff on Wilton and velvet floor coverings on non-Oriental design.

TARIFF COMMISSION

New Import Injury Investigation: On Oct. 8, the Tariff Commission announced the initiation of an escape-clause investigation as the result of a petition filed by Albany Billiard Ball Co. The purpose of this investigation, the nineteenth initiated on behalf of an industry under provisions of the Trade Expansion Act, is to determine whether increased imports of bagatelle, billiard, and pool balls, benefitting in major part from trade-agreement concessions, have been the major cause or threat of serious injury to the domestic industry. A public hearing is scheduled for Dec. 15.

Hearings: During October, the Tariff Commission held three hearings. The first, on October 13, concerned an adjustment assistance petition filed by a textile spinning

and weaving firm—Arista Mills of Winston-Salem, N.C. Only the petitioner testified (See *International Commerce*, Oct. 5).

On Oct. 19, the Tariff Commission resumed its public hearing regarding alleged unfair methods of competition and unfair acts in the importation and sale of certain crawler tractor parts (section 337 of the Tariff Act of 1930). The Commission denied a motion for dismissal and allowed thirty days for interested parties to submit arguments on the merits of the case (see *International Commerce*, June 9, 1969).

Finally, the Tariff Commission concluded four days of public hearings in the investigation of the effect of imports on the non-rubber footwear industry—the first escape clause investigation requested by a President of the United States (see *International Commerce*, Aug. 10). Representatives of domestic producers, labor unions, importers and retailers testified before the Commission.

Tariff Commission Reports: During October, the Tariff Commission released five reports: two on dairy product imports; one on the use of two special tariff provisions; one on the trade agreements program; and one on flavoring extracts and essential oils. In the first dairy investigation, undertaken at the request of the President under section 22 of the Agricultural Adjustment Act (see *International Commerce*, June 15), the Tariff Commission found that the four non-quota items under consideration were interfering with the Government's dairy price support program and recommended that the President establish a quota of zero on certain ice creams, chocolate crumb and animal feeds. The Commission recommended an absolute quota of 30,000 pounds on low-fat cheese for the remainder of 1970 and an absolute quota of 100,000 pounds for each calendar year after 1970. The President must now decide what action is required.

The second report on dairy products, undertaken at the request of the House Committee on Ways and Means under section 332 of the Tariff Act, covered certain cheese having a purchase price of 47 cents or more per pound, lactose, certain chocolate and chocolate articles, and New Zealand cheese costing less than 47 cents per pound (see *International Commerce*, July 13). In investigating the conditions of competition between these items and domestic dairy products, the Commission's report shows significant increases in recent imports. This report does not contain a specific finding or recommendation.

In its factual and informational report on the use of tariff items 806.30 and 807.00, which provide special tariff treatment for imports of articles assembled or processed from American components and materials (see *International Commerce*, Sept. 15, 1969), the Tariff Commission concluded that repeal of the provisions would not significantly slow the development by U.S. concerns of production facilities in low-wage areas for their labor-intensive operations, would cost more domestic jobs than would be saved, and would cause deterioration in the U.S. balance of trade. The report does not require specific action by the President.

The report on the trade agreements program, required to be submitted to Congress at least once a year, pertains to developments during the year 1968. The study describes U.S. commercial and trade policy developments affecting U.S. trade agreements, actions under the Long Term Cotton Textile Arrangement, developments under the U.S.-Canadian Automotive Products Agreement, summaries of Tariff Commission investigations, summaries of national security investigations by the Office of Economic Planning, an account of the 25th Session of GATT, and major commercial policy developments that occurred in leading regional trade arrangements.

The fifth report is part of the series of Summaries of Tariff and Trade Information, containing information on imports, exports and production. This volume, covering flavoring extracts and essential oils, is the eighth of 12 to be published on chemicals and related products covered by Schedule 4 of the Tariff Schedules of the United States.

OTHER AGENCIES

Treasury—Dumping Investigations: On Oct. 11, the Bureau of Customs began withholding appraisement on sheet, plate and float glass from Japan and ceramic tile from the United Kingdom pending a determination as to whether the foreign exporters are selling this merchandise in the U.S. at prices below those in their home markets.

In addition, the Treasury announced that the Bureau of Customs is instituting an inquiry to verify information submitted with regard to the alleged dumping of fish nets and netting from Japan. A summary investigation completed by the Bureau of Customs revealed that there is reason to suspect that prices of the merchandise sold for exportation to the U.S. are less than the prices for home consumption.

Treasury—Amendment of Customs Regulations: In the *Federal Register* of Oct. 9, the Bureau of Customs published an amendment of Section 153.34, effective immediately, that requires notices for withholding of appraisement to be prepared for the approval of the Secretary of the Treasury. Also, on Oct. 9, the Bureau of Customs published proposed revisions of Section 8.53 (j), effective in 30 days, pertaining to the late filing of entries on immediate delivery merchandise. In addition, the Bureau of Customs published in the Oct. 16 *Federal Register* proposed amendments, effective in 30 days, concerning the warehouse entry bond. According to the proposed amendments, the warehouse entry bond

will be in an amount equal to the value of the articles as set forth in the entry, plus the estimated duty and the estimated amount of any other taxes on the merchandise.

Commerce—Adjustment Assistance Actions: Ion Capacitor Corp., a manufacturer of high voltage aluminum electrolytic capacitors used in a variety of electronic consumer products, has been certified eligible to apply for adjustment assistance as provided by the Trade Expansion Act. Ion Capacitor is the fifth firm certified by the Department of Commerce as eligible to submit proposals designed to contribute to its economic adjustment.

In addition, the Economic Development Administration has announced that two firms previously certified as eligible to apply for adjustment assistance — Estey Piano Corp., Union, N.J. and Benson Shoe Co., Lynn, Mass.—will receive technical assistance in preparing business adjustment proposals.

Supreme Court — Imported Whisky Case (*Schieffelin and Co., et. al. v. U.S.)*: On Oct. 19, the Supreme Court denied review and, in effect, upheld the U.S. Customs Court ruling that U.S. treaties do not require imported whiskies to be taxed at the same rate as domestic whiskies because the two products do not reach the U.S. market under "like situations." Under the wine gallon/proof gallon system used by the U.S. to assess import duties and excise taxes on alcoholic beverages, imported bottled spirits of less than 100 proof are assessed as though they were 100 proof, so that in effect a bottle of 86 proof Scotch is assessed for an additional 14 proof. Alcoholic beverages imported in bulk (i.e., non-bottled) at about 100 proof or more are treated the same as domestically produced spirits, which are assessed before the bottling process while they are still 100 proof.

In the court case, several U.S. importers challenged the IRS practice of taxing Irish and Scotch 86 proof whiskies imported in bottles at $10.50 a gallon while taxing 86 proof bottled domestic whisky at $9.03 a gallon.

INTERNATIONAL

UNCTAD Preference Agreement: In the recently concluded meeting of the Special Committee on Preferences of the United Nations Conference on Trade and Development (UNCTAD), the U.S. and other prospective donor countries tabled their revised schemes of generalized tariff preferences for developing countries. The Special Committee reviewed these proposals and concluded that they were "mutually acceptable" to the developed and developing countries. The donor countries will now be seeking legislation or other appropriate domestic approval for their particular schemes with the aim of implementing the arrangements as early as possible in 1971. In the case of the U.S., the Administration's proposal must be submitted to the Congress for approval.

PRESIDENTIAL CITATIONS—*For their efforts in exporting, two companies recently received "E" awards. Aeroglide Corp., Raleigh, N.C., increased sales of its equipment for the food processing industry. The firm's president, James Kelly, above left, holds an "E" flag presented by Commerce's Office of Business Services Director Jack O. Padrick. Right, examining equipment by Arcair of Lancaster, Ohio, are (l. to r.) Herbert Pedit of Arcair, Clemens von Koschembahr of the Cleveland Field Office and William Khoury, Arcair, which exports torches and products for the welding and metal removing industries.*

Trade Fairs, Centers

GE Scores In Paris At Instruments Show; 50 Firms Exhibit

Export sales of superconductive tapes, a highly specialized product, are beginning "to look awfully good" to General Electric, according to Rolf Edholm of the firm's Analytical Business Section, West Lynn, Mass. GE was one of 50 U.S. companies represented in an analytical instruments exhibition at the U.S. Trade Center in Paris, Sept. 22-26.

GE is "beginning to think in terms of sales reaching several hundred thousand dollars a year" for these tapes based on indications from the recent show, commented Edholm. GE projected total first year sales of $600,000—a fifth of the show's $2.9 million total expectations.

Thirteen overseas representatives were sought during the show; three were contracted for France and seven agreements were under consideration at the show's end. The exhibition registered 678 visitors.

U.S. Promotions List

A listing of sales opportunities for U.S. firms in 6 U.S. commercial exhibitions, trade fairs, solo displays and trade missions and 26 shows at the eight U.S. Trade Centers is presented in this issue starting on page 54.

German Center Shows Many Ways To Promote Products

The U.S. Trade Center in Frankfurt recently offered six between-show promotions estimated bringing in $1.2 million in sales over the next year. Kansas City-based DIT-MCO projected $1 million.

The eight Commerce-directed Trade Centers overseas give U.S. manufacturers and their representatives unique opportunities to promote products and services in markets abroad.

Trade Centers make available their marketing services and all their promotional space from lounges to window space, exhibit areas to conference rooms. The promotions staged can be as varied as the products shown: single or multiple exhibitor shows, seminars, sales clinics or lectures.

SIX IN A ROW—*DIT-MCO, one of six firms recently staging between-show promotions at the Frankfurt-U.S. Trade Center, is projecting $1 million after a two-day show at the German showcase.*

FIFTY FIRMS—*An analytical instrument show drew 50 firms recently to the U.S. Trade Center in Paris. Shown above is the booth of Schoeffel Instruments.*

Three 1971 Foreign Fairs Recruit U.S. Participants

American exporters are being recruited to mount displays in three international fairs scheduled during 1971 in which the Commerce Department does not plan a special U.S. exhibition.

Paris will host the annual Household Equipment and Furnishings Exhibition Feb. 27-Mar. 14. At the spring '69 show, 24 U.S. firms were among more than 1,260 exhibitors. Smaller household appliances showed better sales results than the larger items such as washers and refrigerators. Write: French Trade Shows, 1350 Ave. of the Americas, New York, N.Y. 10019.

In Toulouse, France, the Eighth Air and Space Exhibition will open June 21 for nine days. Write the French Trade Show office.

The 35th edition of the Messina International Samples Fair will open Aug. 22 at Messina, Italy. Product categories include agricultural, camping and construction equipment and pleasure boats. Write: Messina International Samples Fair, Viale della Liberta, 98100 Messina.

Major Philippine Task Is Stabilization Of Economy

Heavy doses of strong economic medicine have begun to cure the Philippines of its severe inflationary and balance of payments crises, but not without producing some undesirable side effects. The economy has entered a period of recuperation and won't be back in top shape for some time.

That's the economic situation in the Philippines based on a report to the Department of Commerce from the U.S. Embassy in Manila.

The Government freed the peso in February (from P3.90 to $1; it is now about P6.40 to $1), clamped strict controls on external and domestic credit, and chopped government spending. These firm measures have facilitated a stretch-out of heavy short-term debt obligations due U.S. banks in 1970, improved the trade balance and increased international exchange reserves.

Although the new restraints have steadied the economy, they have inevitably produced temporarily decelerating side effects. Prices, for example, have risen over 1% a month since devaluation. Relatively restrained as inflations go, the price rise set an historical high for the Philippines of almost 20% from June 1969 to June 1970. Industrial and agricultural wages were raised by 33⅓% by legislative action, canceling out part of the potential comparative advantage of devaluation.

Restricted credit and increased costs may have cut the industrial value added growth rate to 0% for this year from an estimated 8% in 1968 and 4% in 1969. Increased costs of inputs such as fertilizer also initially threatened agricultural production, but these hurdles now seem to have been largely overcome. Not unexpectedly, unemployment rose from 6.7% in 1969 to an expected rate of 8-9% in 1970. Real GNP growth has declined from the 6.3% rate posted in 1969.

A turnaround is expected to begin in FY 1971. Although the expected continuation of credit restraints will limit initial gains overall, exports should perform increasingly well. The Government will likely have clarified its investment priorities and the World Bank may begin to introduce additional long-term assistance at reasonable terms. These are preliminary measures, however. The economy has some way to go before it recovers its old growth rate, and it must still cope with its biggest problem —the balance of payments.

The peso floating rate and the IMF-recommended monetary stabilization program have achieved good results, but many problems remain. International reserves, at a low point of about $125 million last December, have risen and apparently stabilized at over $200 million. Some Central Bank short-term debts have been repaid; others have been refinanced under terms calling for final payment in 1975.

Heavy Debt Burden

The total foreign debt of the Philippines is about $1.5 billion. Too much of that is short-term, but stringent efforts are being made to lengthen its average maturity. The debt is being handled much more efficiently than before by a new office in the Central Bank established especially for the purpose. However, the debt service burden will probably remain very heavy for another year or more.

Export performance in 1970 has been particularly good. At the end of six months, exports were about $508.3 million, or $67 million more than for the same period last year. Imports were down about 7%, leaving the trade deficit at the end of June at only $18 million, compared with a deficit of $134 million for the first six months of last year. Invisible transactions showed a slight surplus in the first half of 1970. The net result is a much stronger balance of payments.

Future export prospects are good. Traditional exports such as copra, logs and lumber, and sugar are moving well, and some new exports such as bananas also seem promising. Imports have not gone down as much as had been hoped, probably because the removal of some import letter of credit restrictions has released some pent-up demand. However, the rate of import growth should be lower than in the last three years.

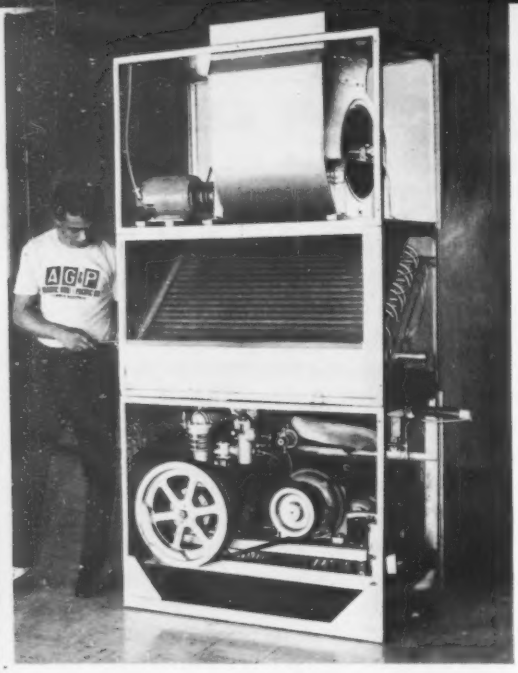
Farmers Produce More

Production of almost all agriculture commodities is expected to increase for the 1970-71 crop year. This general increase in production can be attributed mainly to good growing conditions and increased inputs going into agricultural production.

Current forecasts are for a rice crop of 5 million metric tons, slightly above last year's record of 4,998,000 tons. Production of copra and other coconut products is projected at 1.3 million long tons, 10% above 1969. Sugar production during 1969-70 increased 18% to 2,077,759 short tons.

The past year has seen relatively intense discussion of the issue of foreign investment. The discussion has clarified and at the same time made more uncertain the climate for foreign investment.

In July 1969, the Congressional Economic Planning Office of the House of Representatives drafted and Congress passed a Congressional Resolution on Economic and Social Development. Since known



FILIPINOS ARE SELECTIVE—*Price and credit are becoming key factors for equipment importers. This AG&P cooling unit uses a York compressor.*

as the Magna Carta for Social Justice and Economic Freedom, it states that foreign investment is "welcome to assist in the economic development of the nation" but it shall "not be allowed to dominate the economy or any of its strategic areas. Foreign borrowings by both public and private sectors shall be preferred to foreign investment. . . . National treatment shall be accorded to foreigners only by law, not by treaty. Efforts shall be taken to place all aspects of the distributive trade in the hands of Filipinos." The Magna Carta spells out, in addition, recommendations on giving preference to Filipinos in financing, and reserving "industries vital to national security . . . under the control of Filipinos."

Since the Magna Carta is a Congressional resolution, implementation will depend on the passage of subsequent legislation. In the session beginning 1970, a number of legislative proposals were introduced—but not passed—which purported to be expressive of the Magna Carta. They included Filipinization of credit, and extension of the retail trade nationalization law to include wholesale trade.

On the other hand, Congress passed two bills proposed by the Government which will be of interest to foreign investors. One establishes the Mariveles Free Trade Zone. The other, the Export Incentives Act, provides incentives for industries not previously export-oriented to encourage export diversification. As with other recent economic legislation, incentives will normally be provided to entities which are 60% or more Philippine-owned.

Passage of the Export Incentives Act is the first significant initiative the Government has made in the field of foreign investment this year, although, in keeping with the Investment Incentives Act of 1967, it places strict nationality and other limitations on those who may take advantage of it.

The Government published in August 1970 a Four-Year Development Plan for FY 1971-74. Growth targets are modest. From GNP growth lows of 5% and 4.5%, respectively, for FY 1970 and FY 1971, growth is projected to rise to 6.5% by 1975. This represents an average GNP growth rate of 5.5%, down from the preceding four-year average of about 6.3%, and an average per capita growth of only 2%, down from about 2.75%.

Public Outlays To Rise

The Government expects to achieve its projected growth by stepping up public investment a startling 150%, but private investment is planned to rise by only 20%. Financing will be obtained by a slight increase in taxes, a more substantial increase in domestic, non-inflationary borrowings, and a very major increase (350%) in external borrowings. In addition, the Government hopes to obtain added support through increasing exports 8.5% annually while limiting imports to 5% growth. These growth rates, if achieved, would close the trade gap by the end of the four-year period.

Although the Four-Year Plan is not intended to be an operational plan, it does offer some useful indications as to how and where the economy is expected to develop over the next few years. It is evident, first of all, that an effort will be made to cut import growth to help achieve a better balance of payments. At the same time, the plan projects heavy public investment in roads, power and water resources. Private investment is expected to concentrate primarily (34%) on industry.

Japan will continue to be our greatest competitor in the Philippine market. Japan's share of Philippine imports for the first six months of the year increased to 32% of the Philippine market over 28% for the same period last year, whereas the U.S. share rose from 28% to 29%. Japan, also increased its share of Philippine exports from 35% to 44% as opposed to the U.S.'s decline from 45% to 40%. The United States now retains a dominant market position in only three product areas: electric machinery, chemical elements and compounds, and cereals and cereal preparations.

Trade prospects for U.S. exporters in the near term are limited. During the period ending mid-1971, it is expected the economy will still be winding down. The money supply is tight and may be for some months to come. Dollars will not only be expensive during this period because of the floating rate, but dollar reserves may not accumulate significantly until late 1970. It is also possible that Central Bank limitations on "luxury" or non-essential goods will remain in effect. Concurrently, import substitution measures similar to those recently applied to automobile assemblers may increase.

All these measures raise the cost of importing. Consequently, look for increasing competitiveness in the import market—particularly in terms of price and credit, and especially on large-scale capital projects in which the availability of long-term, low interest financing will be the principal determinant.

Austrians Plan 1971 Export Drive To Keep Economy At Full Capacity

The remarkably buoyant Austrian economy is in one of its longest periods of sustained economic boom. The country, with a new Government headed for the first time by the Socialist Party, is maintaining an overall economic growth rate of 7%. Plans for expansion of domestic heavy industry in steel, chemicals, textiles, and metal manufactures presage further growth over the next three years.

This information is contained in a report received by the Department of Commerce from Joseph O. Eglan, Economic Officer at the U.S. Embassy in Vienna, who goes on to state that some inflationary tendencies have appeared as the Austrian consumer becomes more affluent and purchasing power catches up to supply. To solve this inflationary threat, the Government is prudently deferring promised tax decreases from current high levels. More importantly from the viewpoint of U.S. suppliers, import tariffs on consumer items, particularly food products and other manufactures in high demand, have been reduced and may be reduced further.

This development should present good export opportunities for American firms. The former complaint of local importers that U.S. goods were too high-priced and non-competitive is now diminishing. For the first time in several years U.S. exports in 1970 showed a rise of almost 1% over the previous year in the share of the market. Imports from the United States into Austria in the first six months of 1970 rose to about $62,000,000, an increase of 63% over the same period of 1969.

Despite mounting worry about possible trade protective measures in the United States, many Austrian firms have shown continued interest in developing new trade relations with American firms. The emphasis is on joint ventures, but interest in licensing and direct importation has also been strongly expressed by Austrian businessmen.

Austria's role and significance as a trading nation is being emphasized by continued plans of the Government and quasi-official organizations to focus major efforts on exports. The year 1971 has been designated "Export Promotion Year" by the Chamber of Commerce and plans are under way to increase trade missions to overseas countries and give greater financial and administrative support to private exporters. Reflecting the growth of this trend, some 2,700 Austrian firms will participate in foreign exhibits in 1970 as against 327 in 1950. Thirty-three of the 85 trade fairs in which Austria will participate in 1971 will be overseas.

Capital Exports Considered

The growing strength of the Austrian economy is vividly demonstrated by new interest in manufacturing investment abroad. Over 25 Austrian firms have expressed serious interest in expanding manufacturing operations to the United States.

Austrian trade with Eastern Europe continues to grow. VOeEST, the largest local steel works, has captured an order for a complete ethylene plant near Leipzig, East Germany, valued at almost $400 million. Two complete LD crucible units are being assembled for use by the Czechoslovak Kosice iron and steel works.

Delivery by VOeEST of 520,000 tons of steel for large diameter tubing to the USSR has been completed and now the Austrian firm is engaged in negotiating the sale of an additional 100,000 tons of steel to the USSR connected with the well publicized Soviet natural gas deals with Western Europe. VOeEST has recently concluded a five year contract to supply automotive plate steel to the USSR.

A long-term agreement providing for deliveries of fertilizer and for cooperative projects in chemicals has recently been signed between Russian authorities and the Austrian Nitrogen Works in Linz. Some of the Austrian firms doing business in Eastern Europe would be interested in American partners for the exploitation of Eastern markets.

Others Share In Upswing

Eastern Europe is not the only area where Austrian trade has prospered. Austria has continued to increase trade with its EFTA partners and its trade with EEC countries, particularly Germany, continues to grow.

The boom has resulted in a tight labor market. This has been somewhat alleviated by growth of the foreign labor community, which is now estimated to number 70,000 workers, primarily in the steel, textile and metal manufacturing industries. The foreign workers come mainly from Yugoslavia, but increasing numbers are evident from Turkey and Greece. Also, Austria basically still has a labor reservoir in agriculture and in inefficiently employed industries and service trades which an active manpower policy seeks to transfer into more productive occupations.

The most successful tourist year in Austria's history has increased local initiative for construction of more accommodations in Vienna and the mountain resort areas. Hotel equipment, furnishings and catering supplies are expected to be in great demand.

U.S. suppliers are on the threshold of substantial export opportunities in Austria. The capital goods needed to support expansion plans will be great and U.S. firms

and their European subsidiaries are advised to promote technically advanced product lines. Textile machinery and supplies are expected to be in good demand, as almost all firms in the Vorarlberg textile manufacturing area plan expansions, some of which are under way.

Automated machinery and equipment for capital intensive industries will probably increase in demand and export promotion efforts by private U.S. firms should begin now. Agricultural as well as industrial labor-saving devices appear to have good sales potential. Also, new technology in steel manufacturing, chemicals, and plastics is in high demand. Raw materials and investment goods to feed Austria's growing industrial complex are expected to be in good demand.

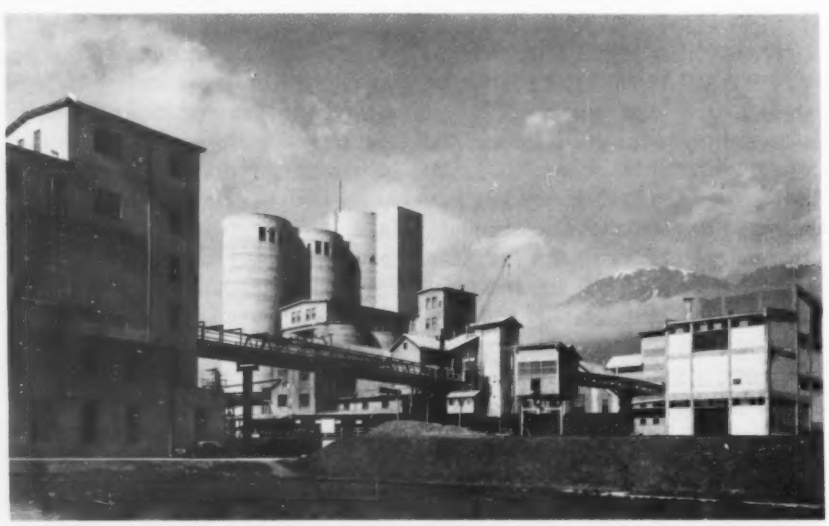
Plans for the improvement and construction of major highways in the western and southern areas of Austria appear to be ready for implementation. U.S. road construction equipment exporters and manufacturers could find this an interesting market.

The second annual British Trade Week has focused attention on the growing market for consumer goods. The 1969 success of this promotion prompted repetition.

Austrian businessmen generally state that they get better servicing from the U.S. headquarters of American firms than from European-based subsidiaries. U.S. firms might do well to encourage their European subsidiaries to pay closer attention to the Austrian market.

Major American banking houses also appear to have sensed new trade and commercial opportunities in Austria. In the last two years, several of them have established operations in Vienna. This could prove to be an excellent bellwether. The continued thaw in East-West trade has put another spotlight on Vienna as the ideal geographical and now financial location as a trade bridge to the Eastern markets.

The recent pattern of U.S. trade with Austria has been significant for the lack of trade promotion efforts on the part of most U.S. business firms in favor of the heavily populated and relatively affluent Common Market countries. Other European countries appear to be regarding this market with new interest as a favorable place to do business. U.S. firms should not miss the opportunities in this growing, reliable and sophisticated market.



AUSTRIAN BUSINESS LOOKS ABROAD—*Industry, prospering from the current boom, is increasingly focusing on foreign markets. Here, a cement plant in the Tyrol.*

Yugoslavs Move To Stem Growing Price Pressures

Sustained rapid acceleration of the Yugoslav economy is beginning to exert pressure on prices and wages. A report to the Department of Commerce from the U.S. Embassy in Belgrade notes that during January-June 1970 the Yugoslav economy continued to display the boom conditions present since the latter part of 1968. Industrial production showed a 10 percent growth rate during the first six months of 1970, while capital investments increased by 45 percent.

By the end of June, economic overheating was intensifying problems of internal price stability. There were substantial rises in living costs and factory prices. Workers' nominal incomes increased by 16 percent over first half 1969 levels and 5 percent in real wage terms. During the first half of 1970, strong increases also occurred in consumer credits, savings deposits and money supply.

In responding to the continuing inflation, the Yugoslav Government froze commercial bank credit at the end-June 1970 level, increased reserve requirements from 30 to 32 percent, placed restraints on short-term credit transactions, and required banks to deny further credits to delinquent debtors. Also, Federal, Republic, and local government budgets will be held firmly down to the levels approved for 1970.

Further medicine against price rises includes a hike in taxes on many luxuries, officially encouraged imports of selected consumer goods and foodstuffs in order to bring down domestic prices, and a requirement of two months advance notice on planned price rises.

By mid-1970 there was further easing of the problem of high non-agricultural unemployment. The average unemployment rate in the

socialized sector (which includes all industry and some farming) over the first six months of 1970 stood at 8.6 percent, well below the 9.2 percent average for the first six months of 1969.

Unusual weather conditions, coupled with some losses from flooding, will result in smaller crops for 1970. The important wheat crop is estimated at 3.8 million tons, down 22 percent from the bumper harvest last year. A corn crop of 7 million tons is forecast, down 10 percent from last year.

Returns from the livestock sector will also be smaller.

Trade Deficit Deepens

Despite an encouraging performance early in the year and an export growth rate of 24 percent compared with January-June 1969, the middle of the year found Yugoslavia running a trade deficit of $440 million, on imports of $1.2 billion and exports of $796 million. The resulting trade deficit was 10 percent higher than in mid-1969, but impressive gains in invisible earnings are expected to ameliorate the deepening trade deficit.

As usual, the largest deficit ($409 million or 93 percent) was run with the convertible area, which as of end-June 1970 accounted for 69 percent of Yugoslavia's total trade, a record level. Conversely, trade with CEMA nations dropped to 24 percent of Yugoslavia's total trade, a new low at mid-year or year-end.

Confronted with very sharp and unexpected rises in imports late in the second quarter, the Yugoslav Government has imposed a 5 percent ad valorem tax on all imports subject to customs duties. The tax, which is designed to combat unfavorable balance of payment trends, is scheduled to remain in effect until June 30, 1971. Many knowledgeable observers believe that the effects of the tax on imports will be minimal, with suppliers either trimming prices or adjusting financing terms to cover the additional cost. First half figures show U.S. exports to Yugoslavia at $58.2 million, 24 percent ahead of last year's pace. Conversely, Yugoslav sales to the American market slumped by 8 percent and stood at $42.8 million as of June. In mid-1970 the United States was in sixth place among Yugoslavia's trading partners.

Yugoslavia continues to offer a growing market for industrial products and raw materials. At the same time, the Government and companies place major importance on encouraging foreign private investment.

The fast growing and increasingly lucrative Yugoslav market has attracted the attention of many American and West European firms. Competition, always intense, has increased accordingly. Personal contacts and regular presence are extremely important, and the retention of a satisfactory Yugoslav agent is highly recommended. There are also substantial sales and public relations benefits which accrue from attending and exhibiting at the numerous (and increasingly specialized) Yugoslav trade fairs. American businessmen report that Commerce-sponsored trade missions have proven an extremely effective vehicle for getting an organized, comprehensive look at Yugoslavia and making the important first contact.

Flexible Approach Helps

American suppliers who are in a position to be flexible in their sales and credit approaches will have marked advantages in competing on the Yugoslav market. The advantages will be even greater for those who are able to enter into joint production plans or investments with Yugoslav enterprises.

Large infrastructure projects such as energy, highway construction, railway expansion, and port construction should continue to offer good sales potential for American equipment makers.

There has been a tremendous upsurge in air travelers being handled by Yugoslav airports (40 percent increase in 1969), largely as a result of the tourist boom. Continuing tourist growth and large planned expansion of domestic air fleets indicate that this traffic will keep increasing. Particular interest has been shown in traffic control and navigation systems, baggage and cargo handling equipment, and ground communications gear.

TOURISTS HIT YUGOSLAVIA—*U.S. exporters and investors can profit from this travel boom. Here, a view of Piran.*

Tourist construction, an important earner of foreign exchange, is experiencing tremendous growth. The success of two Department of Commerce tourist equipment missions to Yugoslavia indicates that makers of air conditioning, hotel, catering, and recreational equipment will find excellent prospects in this burgeoning market.

Despite the recent surge in exports of industrial products, Yugoslavs still pin much of their export hopes on sales of meat and processed and packaged foods. Much interest has also been shown in mass cooking and freezing. Best prospects exist for complete equipment lines which incorporate meat and vegetable processing, freezing, and packaging.

Brazil Is Moving Well Now After Slow Start In '70

Impressive economic gains were chalked up by Brazil during the first half of 1970. The government's 1970 targets of a 7-9 percent gain in gross national product, inflation of around 20 percent, and substantially increased foreign exchange reserves were met or approximated. According to a report received by the Department of Commerce, highlights of the first half include:

► The GNP grew at an estimated 7.1 percent rate.

► The value of exports jumped 27.7 percent to $1,240 million.

► The value of imports rose 6.6 percent, to $720 million for the first four months.

► Gold and foreign exchange reserves increased by $330 million to a total of $1.02 billion.

► Inflation was 8.9 percent versus 10.8 percent in the 1969 period.

► Industrial output was up 8 percent; automobile production rose 11.4 percent, cement output 15.0 percent and electrical energy production 5.8 percent.

► Agricultural production rose at a 6 percent annual rate.

► Total tax revenues increased by 13.7 percent in real terms.

CHANGING FACE OF BRAZIL—*Belo Horizonte, above, is a center for smelting, food processing, other industries.*

The business slowdown that was evident during the first couple of months of 1970 was followed by a steady pick-up in activity. Indications are that the economy will maintain this stepped-up level of activity through the second half. The GNP should continue to advance at a 7 percent rate, supported by a similar gain in industrial production and a firm demand situation. Exports are showing signs of a slight fall-off but still will probably be up by around 22 percent in value for the year. Imports have gained momentum and should be up by around 9 percent for the year.

Official estimates place the 1970 federal budget deficit at 820 million cruzeiros ($197.5 million) or less than 1.0 percent of GNP; this is an insignificant source of inflationary pressure. Inflation should be below last year's 24 percent rate. Interest rates, which are still relatively high, may decline moderately. The money supply is expected to increase by 26 percent in 1970; it rose 28 percent in 1969 and 41 percent in 1968. Labor costs should remain under control. No major changes are expected in the Government's successful economic policies.

In June, the Government announced a program for the integrated development of the Amazon and the Northeast during the 1971-1974 period. The program provides for investments in transportation, irrigation, education, agriculture, and mining. Priority has been assigned to construction of the Trans-Amazon Highway (two highways which would link the Amazonia to the rest of the country); estimated expenditures on this road and related projects during the 1971-1974 period are placed at 2 billion cruzeiros.

The Brazilian Government's desire for a sustained high growth rate and its awareness of the difficulty in developing the country's lesser developed regions make it receptive to foreign capital.

Joint ventures are increasing and appear to have special appeal to the Government, although there is no rigid policy in this respect. With the official welcome mat out, the economy advancing strongly, a rapidly growing domestic market and fiscal incentives that promote exports of manufactures, Brazil offers an attractive climate for U.S. investors.

The substantial build-up in Brazil's foreign exchange reserves in the last eighteen months is allowing the Government to proceed with its objective of liberalizing imports. A first step was taken in late August with the issuance of several regulations simplifying and, to an extent, liberalizing the administrative procedures governing imports.

Market To Double In Decade

There is nothing on the horizon which would presage a slackening of the 6-9 percent growth rates which the Brazilian economy has achieved in recent years. With roughly a 1:1 relationship between the demand for imports and the growth of GNP, the outlook is for the Brazilian import market to double in this decade—from $2 billion to $4 billion.

Competition for this fast-growing import market is fierce; financing is still the key. Although the United States is the leading supplier to this market, U.S. exporters have often found themselves at a disadvantage in competing with European and Japanese firms which have been able to offer more attractive financing. That situation seems to be changing, however, as the Export-Import Bank has launched several new programs and policies designed to make U.S. exporters more competitive.

World Trade Actions

Import Surcharge, Contract Details And Investment Changes Noted

Ghana's recent extensive liberalization of import licensing requirements (*Commerce Today*, Oct. 19) and the need to avoid the threat of immediate and uncontrolled outflows of foreign exchange resulting therefrom, have resulted in a temporary import surcharge on a number of goods. This surcharge varies widely (from 5 to 150 percent of the c.i.f. value) depending on the type of commodity being imported. Some indicative items and the applicable rates are as follows: all organic and inorganic chemicals, 5 percent; spare parts for machinery and equipment, 5 percent; books and maps, 10 percent; agricultural machinery including small tractors, 25 percent; jeeps, trucks, bicycles, used clothing, 25 percent; large tractors, industrial machinery, machine tools, air conditioners, 40 percent; woven fabrics, 75 percent; perfumery, footwear, 100 percent; new clothing, 125 percent; and wigs, 150 percent.

U.S. exporters are reminded that this surcharge is new and that the presently assessed rates are subject to change. They may be increased, decreased, or eliminated, individually or as a group, as Ghana's financial and economic circumstances require.

Copies of the Temporary Surcharge Act are available, on request, from the Africa Division, BIC-884, U.S. Department of Commerce, Washington, D.C. 20230, telephone 202-967-2436.

Libya's Decree 76 of Aug. 6 limited the legal recourse available to foreign firms involved in disputes arising out of government contracts.

The decree, which provides that "every condition in contracts concluded between Ministries, Government departments and public organizations which stipulates that disputes . . . shall be settled by arbitration or a juridical body other than Libyan courts shall be void" also instructs purchasing authorities to "disregard any tender which includes this condition."

A translation of the decree is available from the Africa Division, Bureau of International Commerce.

Need Official Approval

Two circulars issued by **France's** Ministry of the Economy and Finance on Sept. 8 have made some procedural changes in the regulations governing foreign investment operations in France. These modifications apply to firms engaged principally in real estate activities.

Official approval must be obtained for foreign borrowings by such firms (or for guarantees by non-residents of loans made to such companies by residents of France), and for investment (or for purchase of foreign exchange in the case of liquidation) by non-residents in such firms. Prior declarations seeking such approvals have previously been filed with the French Treasury; under the new directives, these declarations are to be filed with the Bank of France. All substantive aspects of the procedure remain unchanged.

Procedures concerning foreign direct investment in France are described in Overseas Business Report 68-103, *"Establishing a Business in France,"* and in the July 21, 1969 issue of *International Commerce*.

The French Government also has announced a relaxation of temporary restrictions imposed last year on purchases of consumer durable goods. With sales of consumer durables slackening (domestic auto sales fell 11 percent during the first seven months of this year), the new measures should stimulate consumer buying.

Both the minimum required down payment and the repayment period for several categories of goods are affected. Down payments for automobiles were reduced from 50 to 40 percent; for trailers from 40 to 30 percent; and for household appliances from 25 to 20 percent. Requirements for commercial and two-wheeled vehicles, professional equipment, radios and furniture remain at 30 percent, and for television sets at 20 percent. The down payment required for purchases of other goods was reduced from 40 to 30 percent.

The repayment period for each of these categories has been set at 21 months; it had previously been 18 months for most categories.

Two anti-pollution decrees issued on Sept. 25, foreshadow France's efforts to deal with the water pollution problem.

Detergent Disposal Curbed

Decree No. 70-871 stipulates that, upon recommendation of the National Committee for Water and of the Council for Public Hygiene, the Government may issue decrees prohibiting or regulating the dumping of certain products into surface and ground waters, as well as into the sea. The Government may at the same time or subsequently issue regulations concerning the sale and distribution of such products.

The accompanying Decree No. 70-872 specifically prohibits the dumping into surface, ground and sea waters of anionic, cationic, amphoteric and non-ionic detergents which do not degrade to at least 80 percent. It also prohibits the sale and distribution in the domestic market of cleaning and washing products containing any such detergent. The methods for testing each detergent concerned will be published in subsequent administrative orders, together with

lists of laboratories authorized to perform these tests.

Decree No. 70-872, concerning detergents, will go into effect on Sept. 26, 1971. However, it will not be implemented with respect to any given category of detergent earlier than six months following the publication of testing procedures.

Both Decrees are based on Law No. 64-1245 of Dec. 16, 1964 concerning the administration and classification of waters and the control of water pollution.

Greece has authorized the establishment of Greek holding companies and mutual funds.

While Legislative Decree No. 608/1970 dated Aug. 20 specficially bars the advertising and sale of foreign mutual funds in Greece, one-fifth of the assets of a Greek mutual fund and one-fifth of the paid-in stock of a Greek holding company may be invested in foreign securities, thus permitting Greek investors to invest indirectly in foreign stocks and bonds. Insurance companies also may now invest their reserves in mutual funds.

Limited To Larger Firms

An important provision of the law is that two-fifths of the capital stock of a mutual fund management corporation must be held by a corporation whose capitalization is at least 150 million drachmas ($5 million), which effectively limits these corporations to the country's larger financial institutions.

A more detailed summary of the legislation is available from the European Division, OIRE/BIC/888, U.S. Department of Commerce, Washington, D.C. 20230.

Germany has opened quotas for imports of some varieties of fresh-cut flowers and cut wax beans. Import license applications for the flowers will be accepted until the value limit is reached, but not later than Dec. 30. If the value limit is reached before then, issued licenses will become invalid three days after publication. Applications for the bean imports will be accepted until the value limit is reached, but not later than Mar. 31, 1971.

The newly-enacted **Philippine** Export Incentives Act of 1970 offers a wide range of tax and other incentives to firms which can qualify as export producers and traders. However, unlike incentive laws in most other developing countries, the new Philippine measure is designed as much to promote Filipinization of the export trade as to increase export earnings.

The only alien firms eligible for export incentives are those which have or acquire "pioneer" status under the Philippine Investment Incentives Act of 1967. See OBR 68-7 of February 1968 for the summary and text of this 1967 Act.) Essentially, "pioneer"' status requires the manufacture or processing (not assembly or packaging) of goods not already being locally produced on a commercial scale and the production of which is not otherwise reserved to Filipinos under the Constitution.

A text of the Export Incentives Act of 1970 may be obtained from the Far East Division, Bureau of International Commerce, U.S. Department of Commerce, Washington, D.C. 20230.

The **Venezuelan** Government has approved a 2 percent ad valorem tax on arriving air freight shipments, effective Oct. 2. Parcel post packages are excluded from this tax.

Eximbank Authorizes Credits Of $14 Million

Eximbank lending activity in the past month has helped finance the sale of almost $14 million in U.S. export.

The loans include:

- $2.2 million, and a financial guarantee of a commercial bank loan for $2.5 million to help the Congo buy U.S. goods and services valued at $5.5 million for construction of an earth satellite station;
- A $500,000 relending credit to Honduras for equipment and livestock purchases from the United Services.
- A credit of $7.1 million in favor of East African Airways, for purchase of three DC-9-30 jets and related equipment and services.
- An $800,000 credit for Malaysia, to buy road construction equipment in the United States.

International Banks Supply $160 Million For Development

Lending activity by international development banks in the past six weeks has provided more than $160 million to aid projects throughout the world.

Imported goods and services for these projects must be obtained through competitive international bids by suppliers from member nations of the banks.

The World Bank has authorized two $20 million loans: one to **Israel** for an agricultural credit program to increase the output and export of high-value crops; and one to help **Finland's** only privately-owned and managed financial institution providing long-term financing to private industrial enterprises.

The World Bank also approved a loan of $4.1 million for a project to improve road sections in the vicinity of Reykjavik, the capital and main economic center of **Iceland.** In **Tanzania,** the International Development Association is extending a credit of $9 million for a project to expand smallholder production of flue-cured tobacco which is expected to improve the livelihood of 15,000 farm families and increase the country's export earnings by $11.5 million annually.

The Inter-American Development

Bank has been active in recent weeks, with loans of:

- $530,000 for highway studies in **Bolivia**;
- $66.5 million to help install an electric power transmission system in **Brazil**, as well as $8 million to help build a new port in that nation's Northwest region;
- $3.8 million for electric power distribution in **Costa Rica**;
- $18 million for highway construction in **Ecuador** as well as $7.6 million to improve the sewerage system of the nation's leading port, Guayaquil, and $4.1 million for agricultural development and irrigation;
- $13.4 million to help finance the first stage in modernizing **Uruguay's** meat-packing industry.

The Asian Development Bank has authorized a $4.2 million loan to help **Malaysia** finance the Besut Agricultural Development Project.

The Asian Development Bank is also providing $650,000 for a feasibility study of the Andong Dam multi-purpose development project in **Korea.**

OFDI Getting Fewer Excess Quota Pleas

In the first nine months of 1970 the Office of Foreign Direct Investments (OFDI) of the U.S. Department of Commerce received from U.S. foreign direct investors 242 applications for specific authorizations for permission to invest in foreign countries more than the quotas allowed by the Foreign Direct Investment Regulations. This total was substantially less than the 303 applications for specific authorizations received in the same period of 1969.

"In a considerable degree," commented Richard P. Urfer, Director of OFDI, "the decline in requests for specific authorizations is an indication of the effect for direct investors of the actions taken to ease the impact of the Foreign Direct Investment Program."

Untying Of AID Loans Will Let Recipients Shop Around For Supplies

Regulations that permit greater procurement outside the U.S. under Agency for International Development (AID) loans are now being published by that agency.

The new policy, which is referred to as "untying" of purchases under foreign aid, was announced by President Nixon in his "Foreign Assistance for the Seventies" message to Congress on Sept. 15.

Pending agreement among major industrialized donor countries on complete untying, the President announced his decision to permit foreign aid procurement in most lower-income countries.

Expansion Of Initial Step

The President pointed out that this is an expansion of an initial step previously taken with respect to Latin America. Effective last Nov. 1, he ordered that loan dollars provided to Latin America could be used to finance purchases not only in the United States, but in Latin America as well.

The new policy, now in effect for all AID loans to the extent that procurement has not yet been initiated, will permit procurement from any independent country in the free world, excluding the recipient country itself and also excluding the following:

Algeria, Andorra, Australia, Austria, Belgium, Canada, Cyprus, Denmark, Finland, France, Federal Republic of Germany, Greece, Hong Kong, Iceland, Iraq, Ireland, Israel, Italy, Japan, Kuwait, Liechtenstein, Luxembourg, Malta, Monaco, Netherlands, New Zealand, Norway, Portugal, Rhodesia, San Marino, Somalia, South Africa, Spain, Sudan, Syria, Sweden, Switzerland, United Arab Republic, the United Kingdom, Yemen and Yugoslavia.

The so-called componentry rule, which now provides that at least 90 percent (in value) of components of AID-financed commodities must be from an approved source for the finished commodity, is relaxed to provide that at least 50 percent of the value of finished items must be from eligible sources.

Where U.S. flag shipping is available, the requirement that 50 percent of AID cargoes to a given country must be transported in U.S. ships still will apply. Where U.S. flag liner service is not available, blanket determinations will be made to that effect by AID, permitting transport in ships of eligible countries, other than the United States. Costs of shipping on carriers of eligible source countries (excluding the recipient country) will be financed under AID loans.

Costs of marine insurance obtained on a competitive basis from insurance firms in any eligible source country will be financed under AID loans, with certain conditions.

Denial Policy Continued

The policy of denying shipment on ineligible vessels—such as non-free world vessels and those which have called at Cuba or North Vietnamese ports—will be continued.

With respect to goods financed under so-called program loans (general commodity loans rather than loans for specific project commodities), the price paid may not exceed the prevailing market price in comparable export sales in the source country and must be lower than the market price prevailing in the United States, calculated on a landed cost basis.

Beginning in late 1960, with a directive from President Eisenhower, U.S. foreign aid was progressively "tied" to U.S. purchases, so that procurement in the United States increased from 41 percent of all AID-financed commodities in fiscal year 1959 to 99 percent in 1969.

Worldwide Business Services

International trade specialists in the Department of Commerce and Foreign Service Officers in the U.S. Embassies and Consulates around the world are continually developing specific commercial opportunities through which American companies can find buyers, agents, partners or investors overseas. One of the major means for communicating these opportunities promptly and accurately to the U.S. business community is through the columns of this magazine. The section that follows, incorporating the familiar Licensing and Investment Opportunities and Foreign Trade Opportunities, presents details about U.S.-sponsored overseas exhibitions, licensing and joint venture proposals, opportunities to sell to foreign firms and government agencies, appoint agents, major construction and expansion projects, and U.S. visits by foreign buyers.

U.S. Promotions Overseas

THAILAND. Agricultural Machinery, Equipment, Chemicals & Supplies. The U.S. exhibition in Chiang Mai will be the 7th Up-Country Exhibition sponsored through the Bangkok Trade Center in the past three years. Chiang Mai is Thailand's second largest city. The exhibition will include displays organized by the U.S. Department of Agriculture.

The key market in Thailand today is the $200 million market for agricultural machinery, equipment, chemicals and supplies. Market research predicts this market will grow 15-20 percent annually over the next two years. Sales potential has been identified for four wheeled tractors of 40-50 hp, 50-70 hp, and above 70 hp, two-wheeled tractors, parts and accessories; disc plows, harrows, rotovators, seed planters and distributors, hay and grass mowers, hullers and shellers, threshing machinery, land grading blades, stalk shredders, fertilizer distributors, hay balers, pumps, engines for irrigation equipment, machinery and hand-powered pesticide sprayers, poultry incubators, animal feed processing machinery, and selected rice milling equipment. Call James J. Reilly, 202-967-5281. U.S. Commercial Exhibition, Chiang Mai Winter Fair. Dec. 31-Jan. 6.

NETHERLANDS. Environmental Control Equipment Trade Mission. Expenditures by the Netherlands on new air and water pollution control equipment and systems over the next five years are estimated at $277 million. Over the next 30 years, an estimated $420-$550 million will be spent on solid waste disposals. Public concern over pollution problems is spurring the Dutch to sharply increase Government and industry spending in these areas.

The Mission, which will include a seminar in Rotterdam, anticipates interest for: auto exhaust control devices, exhaust analyzers, methods for treatment of chemical industry wastes, large scale incineration, waste transport systems, and disposal methods for slag heaps, junked cars and sludge. Deadline for entering is Nov. 18. Call Sam Cerrato, 202-967-3904. Trade Mission. Jan. 17-27.

FRANCE. Materials for the Electronics Industry. The size of the French electronics industry is approximately the same as that of West Germany and Great Britain. Provincial figures indicate that industry sales advanced to a record $1.8 billion in 1969. Electronic components was the most buoyant sector during 1969 with an increase in sales of about 25 percent. The French Government is continuing its support of the electronics industry through Plan Calcul and Plan Composant. To remain competitive in world markets, French manufacturers of electronic equipment and components look to the U.S. for technologically advanced materials. Call Donald G. Johnson, 202-967-3352. Paris Trade Center. Jan. 18-22.

GERMANY. Chromatographic, Spectroscopic Instruments. Research indicates a $35 million market for chromatographic-spectroscopic instruments, with an annual market growth rate of 17 percent. There is a high usage ratio for chromatographic-spectroscopic instruments by industry, education and science. Germany's Government has approved a $2.9 billion budget and allocations in it for industry, science and education are up 43 percent to almost $1.1 billion.

Students familiar with chromatographic-spectroscopic instruments and methods are graduating from universities at an increased rate; in 1967, approximately 8,000 university students graduated from chromatographic-spectroscopic oriented courses; by 1980 the number is expected to double from the current 496,000 to 1 million; also some 30 new universities are to be built by then. Call Don Schmadel, 202-967-4601. Frankfurt Trade Center. Jan. 18-22.

UNITED KINGDOM. Mini-Computing Equipment. The U.K. import market for computers and allied equipment is about $200 million and rising. U.S. exporters have about half of this market, and in the two-year period of 1967-69, U.K. imports from the U.S. advanced an estimated 33 percent.

Imports of small-sized systems are expected to rapidly replace imports of medium-sized systems over the next 5 years. Excellent sales prospects appear for basic units and peripherals in the explosive market of newer, lower cost, mini-computing equipment. Call Franc Manzolillo, 202-967-4443. London Trade Center. Jan. 25-29.

JAPAN. Test & Measuring Equipment, Instruments for the Electronics Industry. Japan's domestic consumption of these products reached a level of $94 million in 1968 and is expected to exceed $110 million in 1970. Imports accounted for 41 percent of total consumption or $38.8 million in 1968. All evidence indicates that the demand for U.S. manufactured test and measuring equipment and instruments will continue to grow, concomitant with an expanding electronics industry which experienced a 38 percent growth rate in 1969. A 26 percent increase is forecast for 1970.

Domestic producers of test and measuring products, with a limited number of design engineers on their staffs, have concentrated on the manufacture of products which have a mass market, enabling imports to satisfy the demand for the sophisticated products. Call Henry Watts, 202-967-4512. Tokyo Trade Center. Jan. 25-30.

SCANDINAVIA. Metal Parts Production Equipment. This promotion will be directed at the 10,000 companies in the four Nordic nations involved in production and finish of metal parts.

The four Scandinavian countries invest over $160 million annually for metalworking equipment, and about two-thirds of this market is in Sweden, which has a highly advanced metalworking and engineering industry very competitive in world markets. In addition, considerable amounts are spent for testing and quality control equipment. Half of the metalworking equipment they use is imported, and Swedish tariffs are very low for this equipment. In Finland and Norway there are no tariffs for many types of metalworking equipment which are not produced in those countries on an industrial scale. Call C. E. Walls, 202-967-4256. U.S. Trade Center for Scandinavia, Stockholm. Jan. 25-30.

FRANCE. Vacuum & Cryogenic Equipment. The application of vacuum and cryogenic equipment for research and industrial purposes is developing rapidly. Sales of vacuum products, currently estimated at about $21-25 million, are growing at a rate of about 10-15 percent annually. Sales of cryogenic equipment are estimated at $5.4 million. France is placing heavy emphasis on encouraging modernization to enable French manufacturers to compete in the duty-free Common Market.

American equipment is highly regarded. Strong interest exists in the electronics and metallurgy field, two very important industries in France. Good sales prospects are also found in the optical, pharmaceu-

tical and plastics industries, as well as medical applications and French research laboratories. Call John L. Wolf, 202-967-3822. Paris Trade Center. Feb. 8-12.

GERMANY. Computer Display Equipment. German purchases of electronic data processing equipment during 1969 were estimated to climb to $1.2 billion by the end of 1974. More than 75 percent of German equipment in use is of U.S. design. Germany continues to be the largest market for U.S. exports of electronic data processing equipment.

U.S. exports have nearly tripled between 1966 and 1969 and future growth appears certain as recent U.S. technological breakthroughs particularly toward miniaturization continues.

Estimates indicate that additional installations of EDP equipment will bring this total to 8,000 by the end of 1970 and to over 17,000 by 1974. Contact Andre Williams, 202-967-2425. Frankfurt Trade Center. Feb. 15-19.

ITALY. Electromechanical Precision Parts. Electromechanical precision parts is a healthy and expanding sector of Italy's vast electronic components market. In Italy today, there is a positive trend toward the use of advanced electromechanical precision parts in the production of consumer electronics, automobiles, machine tools, household appliances, aircraft and aerospace equipment. Italian industry is expanding at an average of 12 percent annually and if this trend continues the market could expand well beyond the conservative $40 million forecast for 1970 for electromechanical precision parts. Call 202-967-5351. Milan Trade Center. Feb. 16-20.

UNITED KINGDOM. Training Aids for Business & Industry. The U.K. is the largest, fastest growing European market for training equipment and software. The Industrial Training Act of 1964 has involved most manufacturers in employee development. Industrial training has increased 25 percent with over 1.4 million employees being trained at any one time.

Business schools are in a major growth phase and educational reform has quadrupled educational expenditures in the last 10 years. Training programs for educating computer systems designers, analysts, programmers and operators also offer an excellent market. Call Lee W. Swift, Jr., 202-967-4461. London Trade Center. Feb. 22-26.

JAPAN. Shipbuilding & Marine Equipment. Japan is the world's leading shipbuilder, launching 9.3 million gross-tons in 1969; it is also first in ship exports. At the same time, Japan is a major importer of shipbuilding and marine equipment, purchasing $47 million worth from overseas suppliers in 1969, of which $14 million came from the U.S.

Demands for oceanographic equipment are growing rapidly, and this equipment will also be featured in the exhibition. Imports rose from $3 million in 1967 to nearly $9 million in 1969.

Market research conducted in Japan identified good sales potentials for U.S. suppliers of the following equipment: navigation and communication, electronic, shipboard, marine (supplies), and oceanographic including professional scuba, current measuring systems, and depth recorders. Call William E. Dawson, 202-967-5682. Tokyo Trade Center. Feb. 22-27.

Sales opportunities in 6 U.S. commercial exhibitions, trade fairs, solo exhibitions and trade missions and 26 shows at the eight U.S. Trade Centers are being offered to present and potential U.S. exporters between now and June 25, 1971.

Each Trade Center exhibition is limited to one particular line of products and centers are located in London, Bangkok, Milan, Frankfurt, Stockholm, Sydney, Tokyo and Paris. For further information on the Trade Center shows described or for more facts on U.S. exhibitions, **write:** Commercial Exhibits Program, BIC-932, U.S. Department of Commerce, Washington, D.C. 20230.

Trade missions are groups of U.S. businessmen organized to travel abroad promoting the export of U.S. goods and services made by their particular industry. **Write:** Trade Missions Div., BIC-926, U.S. Department of Commerce, Washington, D.C. 20230.

SCANDINAVIA. Electronic Components. This will be the third specialized exhibition of electronic components at the U.S. Trade Center for Scandinavia, and it will be directed to the electronic equipment manufacturers in the Nordic countries which produce over $1 billion of electronic equipment and import the great majority —over $200 million—of their requirements for electronic components.

U.S. exports of electronic components to these companies jumped $9 million last year to a total of $35 million or 17 percent of the import market. Exports of many types of U.S.-made electronic components to Scandinavia, such as integrated circuits and semiconductors, doubled and tripled last year. Scandinavian electronic equipment production is continuing a two-year boom. Call A. J. Beiring, 202-967-3713. U.S. Trade Center for Scandinavia, Stockholm. Feb. 22-27.

FRANCE. Plastics Production Equipment. Increasing industrial and consumer demand for plastics products is being translated into an expanding market for U.S. manufacturers of machinery, controls, and materials for plastics production. Excellent opportunities exist for a variety of American equipment, especially large production capacity injection presses, extruders and impregnating plants, as well as machinery like blow moulders for small thick-walled containers. Apparent consumption of plastics production machinery in France topped $50 million last year, less than half of which was satisfied by domestic production. Call 202-967-2835. Paris Trade Center. Mar. 1-5.

ITALY. Metal Finishing & Surface Treatment Equipment, Supplies. Italy boasts one of the world's finest automobile industries, also the world's third largest household appliances industry. The Italian steel industry has been growing steadily, while its electronics industry has been growing rapidly. These and other industries, in one of the healthiest economic climates in Western Europe, spent an estimated $25 million in primary items of metal finshing and surface treatment products in 1969.

Demands are growing and Italian purchasing interest is directed increasingly towards more advanced American products and processes. Fully automatic equipment, the most advanced painting and coating equipment, advanced test instruments, ultrasonic equipment, specialized solutions and finishes, and a number of new processes are some of the items sought. Call 202-967-3968. Milan Trade Center. Mar. 8-13.

AUSTRALIA. Graphic Arts Equipment. While the Australian GNP was setting records in 1969, the graphic arts industry was expanding even faster. Because domestic production is able to supply only 9-10 percent of the total market for printing and bookbinding equipment each year, industry must rely on imports. In 1969 these amounted to $25.5 million, of which U.S. exporters were able to furnish a market-leading 34 percent share. Between 1963 and 1968, the Australian graphic arts industry increased its output by 64 percent to reach a production level of $651 million.

The success of U.S. firms in this field is largely attributable to the reputation they enjoy for producing modern machinery noted for its reliability, advanced technology and minimum down-time. Australian buyers in the graphic arts field include 2,649 printing and stationery establishments. Call Tom Mayfield, 202-967-4056. Sydney Trade Center. Mar. 15-19.

GERMANY. Analog & Digital Measuring, Recording Instruments. The market for measuring and recording instrumentation is strong and indications point to a steady growth. The total German market for this equipment grew approximately 40 percent during the 1967-69 period, from $120 million to over $168 million. Originally the center of the electrical measuring technique, West Germany has become an important customer for American manufacturers of measuring equipment, especially sophisticated, high precision types.

German industry, however, remains among the leaders in the field of standard electrical meters and measuring instruments and is a world competitor. Imports of measuring and recording instruments grew at almost 46 percent in the 1967-69 period. Call 202-967-3088. Frankfurt Trade Center. Mar. 15-19.

JAPAN. Heating, Air Conditioning & Refrigeration Equipment. Demand in Japan for heating, air conditioning, and refrigeration equipment rose to almost $650 million in 1968, $37 million of which was imported from the U.S. Air conditioning and refrigeration equipment consumption tripled between 1966-68 while heating equipment demands doubled.

Prospects for further expansion of this market are excellent. The housing boom in Japan—3 million new starts in 1970 alone—is creating a new mass market for residential heating equipment. Local government and private sector concern about growing air pollution is stimulating development of plans for new heating and cooling systems which will use natural gas. This will require new high technology equipment available in the U.S. Contact Maurice Shea, 202-967-4511. Tokyo Trade Center. Mar. 22-27.

SCANDINAVIA. Electronic Data Processing Equipment. The four Nordic countries represented a $100 million market for electronic data processing equipment in 1969 with demands projected increasing at a 20 percent annual rate to over $200 million by 1973. Computer installations are forecast to increase to 2,600, double the number in use early last year. Imports currently account for about 95 percent of the market and are expected to reach an estimated $190 million in the next three years.

Direct U.S. sales rose to $30 million in 1969, a third of the area's imports of EDP equipment and the largest market share of any foreign supplier. Purchases of U.S. computers and peripheral equipment are projected to climb to an estimated $55 million by 1973 and account for 30 percent of the import market. Scandinavian end-users are expanding computer applications into broader and more sophisticated areas and have indicated a strong interest in the latest U.S. equipment, systems and software materials. Call Stanley Hays, 202-967-5751. U.S. Trade Center for Scandinavia, Stockholm. Mar. 22-27.

FRANCE. Automotive Diagnostic & Service Equipment. France is on the verge of important developments in the areas of automotive safety and performance testing and servicing which will increase sales opportunities for U.S. manufacturers of a variety of equipment and instrumentation. The appearance of diagnostic centers, expanding services offered by major oil companies at hundreds of outlets, and the prospect of eventual obligatory periodic inspection of private vehicles in France are some major market factors.

Excellent sales prospects are reported for such diverse products as engine and chassis dynamometers and various electronic testing instruments, car wash equipment, automatic tire changing and mounting machines, and exhaust gases emission monitoring devices. Call 202-967-2795. Paris Trade Center. Mar. 29-Apr. 2.

ITALY. Dairy Processing Equipment. The Italian dairy processing industry is at a turning point. The rising economy has increased the Italian people's standard of living, causing a marked increase in demands for dairy products. To improve production capabilities and meet new consumer demands, the dairy industry must modernize its production techniques by utilizing more technologically advanced equipment. Over $22 million was invested in equipment for the industry in 1967-69.

This exhibition will be held in the agricultural pavilion of the International Milan Samples Fair. Call 202-967-4508. Milan Trade Center. Apr. 14-25.

SCANDINAVIA. Pulp, Paper & Converting Equipment. Over 300 Scandinavian pulp and paper plants and numerous converters comprise an excellent market for the latest in U.S. machinery, controls, equipment and supplies. Swedish pulp and paper plants have been spending $200 million per year for new plants and equipment. The year 1969 witnessed new records in Swedish pulp and paper production as the industry operated at virtually full capacity. Total exports of paper and paperboard increased by 13 percent over 1968.

Scandinavian plants are forced by international competition to invest in modern, large-scale machinery. Sweden is undergoing modernization, capacity expansion and vertical integration of its pulp and paper industry. Call John R. Crown II, 202-967-4421. U.S. Trade Center for Scandinavia, Stockholm. Apr. 19-24.

FRANCE. Chemical Processing Equipment & Industrial Process Controls. The French chemical industry has an 8.5 percent growth rate; its output has nearly doubled in the last six years; capital investment is expected to be $750 million in 3 years, and $400 million in export sales opportunities for over five years is forecast. The French chemical industry has $4 billion to spend in the next five years on modernization and construction projects.

As one of the strongest sectors in the French industrial complex, the chemical industry leads the list consistently in annual growth and is now searching for the latest developments in plant automation and chemical processing equipment. Call 202-967-2434. U.S. Commercial Exhibition. Salon International De La Chimie, Paris. Apr. 19-25.

UNITED KINGDOM. High Performance Materials. A symposium/exhibition of materials and design applications will feature U.S. materials producers, fabricators, designers, end users, engineers and management. Sophisticated and technologically advanced products of all kinds continue to have excellent sales opportunities in the U.K. In 1967, Britain paid $77.7 million for American expertise. Exhibits will feature advanced composite materials, plastics, metals, superalloys and related fabrication equipment. Call Franc Manzolillo, 202-967-4443. London Trade Center. Apr. 26-30.

FRANCE. Reprographic Equipment. The use of microfilm and other advanced reprographic systems in France is expanding rapidly and total annual sales of these products are estimated at $165 million. Sales are soaring as end users begin to employ such equipment in commerce, industry and government. It is projected that the microfilm market will grow at least 20 percent a year over the next 3 years, and duplicating and photocopy equipment will have a combined annual growth of 15-20 percent for the same period.

France relies heavily on imports to meet demands for these products and U.S. goods are predominant. Call Donald G. Johnson, 202-967-3352. Paris Trade Center. May 3-7.

GERMANY. Production Equipment for the Electronics Industry. The German electronic industry has for the past three years been in a state of exceptional growth. This growth, caused by increasing demands for the most modern consumer, industrial and scientific electronic products, has strained the German production facilities to its maximum output capabilities, yet there remains a tremendous backlog of orders. German electronic producers are now anxious to buy modern equipment which will automate and rationalize their production facilities. For 1971 it is estimated that these producers will purchase $24 million of production equipment and will, in 1972-1974, purchase $12-15 million more per year. Call Jack Whiteley, 202-967-2425. Frankfurt Trade Center. May 10-14.

JAPAN. Automation Controls & Related Devices for Production. The U.S. exhibition in the Japan 4th Automatic Control Equipment Show is planned to capitalize on the rapidly expanding market for sophisticated automation equipment and controls. The rapid expansion of Japan's economy has resulted in increasing labor shortages and rising wages, intensifying demands for automating production. Even large enterprise employing over 1,000 workers are affected; one-third of which report labor shortages are affecting production.

Market research identifies the following product categories as having the best potential for sales in Japan: process control computers, control instruments and valves, numerical controls, direct numerical controls and retrofit, industrial robots, servo systems and controls, fluidic systems and components. Call Robert Levine, 202-967-4705. U.S. Commercial Exhibition, 4th Automatic Control Equipment Show. Tokyo. May 14-18.

ITALY. Advanced Medical Equipment. Italy plans to spend $480 million during 1971-1975 to expand its regional hospital system by 40,000 beds. An estimated $41 million will be spent on equipment, including intensive care equipment for over 2,000 beds. Market research has confirmed that U.S. suppliers have opportunities to sell various types of advanced medical equipment in this growing market to both public and private hospitals. Call 202-967-3968. Milan Trade Center. May 19-23.

FRANCE. Aerospace Equipment. Air transportation in Europe, both passenger and freight, is expanding rapidly. Ground support facilities are becoming strained to overcapacity. Many airports, modern a few years ago, are becoming obsolete. New supersonic jets and high capacity aircraft will aggravate the situation. The growth in air traffic is expected to create a strong demand for all types of aircraft, components and related support equipment. The U.S. is a leader in finding solutions to aerospace problems.

Much of the free world's current demand for aerospace equipment and components is supplied by the U.S. or by foreign manufacturers under U.S. license. For the European aerospace industry, the need for efficient and economical equipment and components is urgent. Call Charles M. Whitley, 202-967-4961. U.S. Commercial Exhibition, Paris Air Show. Paris. May 27-June 6.

SWITZERLAND. Environmental Pollution Control Equipment. Europe is more densely populated than the United States, and its industry has had a free hand for generations in polluting the environment. Although laws have been on the books for many years to require control of these pollution activities, it has been only recently that public consciousness is forcing governments to think seriously about

enforcement. Switzerland plans to spend $2 billion within the current decade to clean up their water supplies.

France is pursuing control plans that will subsidize municipal water plants up to 70 percent of investment costs and industrial plants up to 50 percent. Belgium plans to spend $20 million in 1972 to protect underground and surface water. Italy has major plans to catch up with her neighbors to the north. PROAQUA PROVITA is Europe's best known trade fair in the field of environmental pollution control. Call 202-967-3822. U.S. Commercial Exhibition, PROAQUA PROVITA. Basel. June 8-12.

GERMANY. Industrial Assembly Equipment. The field of assembly fastening and techniques in Germany is still in the early stages of development. There are numerous ways to cut costs that have not yet been exploited. German manufacturers continue to look to the U.S. for new techniques in the field of special fasteners. American licensing agreements as well as agency representation are readily accepted. An estimate of the demand in Germany for industrial assembly equipment is between 10-15 percent of the demand in the United States. Contact William Gaines, 202-967-4073. Frankfurt Trade Center. June 21-25.

Space Fully Booked

The following exhibitions and trade missions, in which all exhibit space has been reserved, are still open for visits by interested industry representatives. U.S. firms with sales representatives in the exhibitions' or missions' market areas and exhibitors may wish to ask local businessmen to visit them.

Flow Automation Equipment, London Trade Center, Nov. 9-13; Biochemical Test & Control Equipment, Sydney Trade Center, Nov. 9-13; Industrial Air Treatment Equipment, Frankfurt Trade Center, Nov. 9-13; Fluid Power Systems, Tokyo Trade Center, Nov. 9-15; Packaging Machinery & Materials, U.S. Commercial Exhibition, EMBALLAGE '70, Paris, Nov. 9-15; Pumps, Valves & Compressors Trade Mission, South America, Nov. 9-20; Oceanology Equipment & Instrumentation, U.S. Commercial Exhibition, Interocean '70, Duesseldorf, Nov. 10-15; Industrial & Scientific Temperature Measurement and Control Equipment, Stockholm Trade Center, Nov. 16-21; Printing & Bookbinding, Food Processing, Packaging Equipment, U.S. Solo Exhibition, Copenhagen, Nov. 17-22.

Dental Catalogs, U.S. Catalog Exhibit, Bangkok, Nov. 18-22; Computer Terminals & Peripheral Equipment, U.S. Commercial Exhibition, BIAS, Milan, Nov. 20-26; Lasers & Electro-Optical Equipment, Milan Trade Center, Nov. 20-26; Food Processing & Packaging Machinery Trade Mission, South America, Nov. 29-Dec. 16; Equipment for Business & Industry, U.S. Solo Exhibition, Taiwan, Nov. 30-Dec. 5; Tourism Equipment Trade Mission, Mexico, Nov. 30-Dec. 16; Transducers, Paris Trade Center, Dec. 1-5; Dynamics Testing Equipment, Frankfurt Trade Center, Dec. 7-11; Medical Engineering Equipment, London Trade Center, Dec. 7-11; Auto & Boat Repair, Test Equipment, Scandinavian Trade Center, Dec. 7-12.

Licensing, Investment Abroad

2640, 2661 — SWITZERLAND — Firm seeks licensing arrangements with medium-sized manufacturers of **special papers and paper articles.** Particularly novelties in the fields of paper for hygienic or medical applications and paper insulating materials used in the building industries. Would consider finishing or coating imported semi-finished paper products. Firm employs 125 and 14 salesmen; has well-equipped plant and ample financial means. Peter L. Basci, Gen. Mgr., Schweighauser AG, Schlaflistrasse 17, 300 Bern 25. WTD. P-70875

2649, 2821—AUSTRIA—License to make **paper, paperboard or plastic sales promotion articles** and/or **novelty packagings.** Products to be marketed in Austria and potentially in Eastern Europe. Firm established in 1878; presently engaged in printing and paper distribution field. Innviertler Verlag Josef Stampfl & Co. GmbH, Stadtplatz 35, A-5280 Braunau/Inn, Austria. WTD. P-70893.

2650, 2752 — SWITZERLAND — Established printer and manufacturer of **paperboard packages and advertising displays** seeks cross-licensing arrangement with a packaging firm to introduce U.S. packaging systems in Switzerland and Europe and to exchange know-how. Firm manufactures folding, drawing, set-up and other boxes and wrappers; liquid, air, grease, steam and flavor tight packaging and litho and offset printing machines. Annual sales reported are $2.3 million. Dr. Henry Steiger Jr., Steiger AG, Museumstrasse 10, 3000 Bern. WTD. P-70898

2893—INDIA—Manufacturer of industrial and decorative paints seeks technical and financial assistance to establish a plant in Gujarat to produce 5 metric tons daily of **gravure, letterpress, lithographic and flexographic inks.** Capital required for the project is estimated at $320,000. Most raw materials needed are available locally. A representative of the firm will visit New York, Buffalo, Cleveland, Detroit, Chicago and Minnesota for 6 to 8 weeks beginning Oct. 31. U.S. firms interested in the proposed joint venture can contact A. N. Amin, Chairman, Comet Paints Pvt., Ltd., in the U.S. c/o N. N. Amin, 26 Galston Dr., R.R. 4, Trenton, N.J. 08691. Indian address: Anand-Sojitra Road, Vallabh Vidyanagar, Dist. Kaira, Gujarat, India. WTD. P-70885

3291—GERMANY—Firm seeks licensing and joint venture arrangement with manufacturer of **elastic agglutinated abrasives** for treatment of metal, wood, ceramics, glass and plastic. Compounds should be moldable into forms of disks, plates, cones and cylinders. Established in 1924; employs 50; annual turnover of $300,000. Modernly equipped facilities available for production. ARTIFEX, Dr. Lohmann & Co., Warnstedtstrasse 59, 200 Hamburg 54. WTD. P-70892

3433-3491—ENGLAND—Machinery manufacturer wants license to make **package incinerator units** for use by small installations and to handle general industrial waste. Also license for **collapsible shipping containers** with storage capacity of 1-5 tons. Firm produces conveyors, feeder and bag slitting machines. R. H. Cooper, Standard Machines Div., Simon Handling Engineers Ltd., P.O. Box 31, Stockport, Cheshire. WTD. P-70878

3500—SWITZERLAND—License to make or subcontract for production of **machine tools and accessories, packaging machinery and screw machine products.** Firm has produced parts and machinery on subcontract basis for several major Swiss and foreign concerns. Experienced in converting specifications into metric system. P. Bischofberger, AG Technisches Buro AAA, Metzgergasse 47, 3011 Bern. WTD. P-70888

3532, 3533, 3535—NEW ZEALAND—Large manufacturing firm wishes to locate a joint venture partner for the manufacture of **petroleum prospecting equipment,** e.g., drill rods, bits, casings, etc., and equipment for **mechanical handling devices.** Company deals primarily in metal fabrication including heavy gage metal. Annual sales over $3 million. Company willing to contribute land, buildings, local industrial know-how, engineering serv-

Licensing and investment proposals from foreign firms are listed in these columns. Specific product interests in each proposal are highlighted in bold type to facilitate identification and each proposal is preceded by the appropriate four-digit product number taken from the Standard Industrial Classification (SIC) manual.

Background information on opportunities abroad and also assistance on overseas investments are available from the Office of International Investment, U.S. Department of Commerce, BIC-878, Washington, D.C. 20230. "P" numbers should be used when responding to specific proposals.

For additional information on opportunities to manufacture foreign firms' products in the U.S., write Commerce's Office of International Investment, BIC-874, referring to the applicable file number assigned each opportunity.

WTD indicates that a World Trade Directory Report containing financial and background information on the foreign firm is available for $2 from the Department of Commerce, BIC-924, Washington, D.C. 20230 or from any Commerce Field Office.

ices, some capital. James J. Drewry, Asst. Mgr., Mason Bros. Engineering Ltd., P.O. Box 2218, Auckland. Company brochure available on loan from: Office of International Investment, Dept. of Commerce, BIC-878, Washington, D.C. 20230. WTD. P-70881

3535, 3551 — ENGLAND — Licenses to produce **pneumatic or mechanical flexible conveying equipment** for powdered and granular materials. Also, continuous **dry mixing equipment**. R. H. Cooper, Standard Machines Div., Simon Handling Engineers Ltd., P.O. Box 31, Stockport, Cheshire. WTD. P-70880.

3800 — GERMANY — Small distributor seeks to expand line through licenses. Current products include **measuring and control equipment control valves, oil filters and pressure switches.** V.I.A. Vertretungsbuero fuer Industrielle Ausstattungen GmbH, 56, Gneisenaustrasse, 4 Duesseldorf. WTD. P-70887

5096—ENGLAND—Partnership sought by firm presently engaged in selling **paper and plastic disposable items** to the hotel, hospital and catering trades. P. P. Downey, Peter Downey (Hygiene) Ltd., 20 Bonville Rd., Brislington Trading Estate, Bristol BS4 5HQ. Copy of product price list and outline of company operations available from Office of International Investment, Dept. of Commerce, BIC-878, Washington, D.C. 20230. WTD. P-70882.

OFDI Official To Speak At Investment Rules Seminar

The Deputy Director of the Office of Foreign Direct Investment, Donald P. Katz, will be the featured speaker at an American Management Association seminar studying his agency's operations. The session is scheduled for AMA's New York headquarters from Nov. 18-20.

Also speaking will be Mark C. Feer, a general partner in Kuhn, Loeb & Co. and former Deputy Assistant Secretary of Commerce for Financial Policy.

Investing In Indonesia Topic Of Three Seminars

Venture and investment opportunities in Indonesia will be the topics of three privately sponsored two-day symposia in December. Organized by Ness Industries, Inc., the meetings are scheduled at the Plaza Hotel in New York, Dec. 1-2, the Drake Hotel, Chicago, Dec. 3-4, and the Fairmont Hotel, San Francisco, Dec. 7-8.

The sessions will include an overview of Southeast Asia and cover Indonesia's commercial environment, foreign investments, labor force, management, communications, banking, exchange and trade considerations, and taxation.

Write: Ness International, 422 Waverley St., Palo Alto, Calif. 94301 (415-322-4626).

Indian Firm To Expand With Joint Ventures

Seeking to diversify, the Hindustan Sanitaryware & Industries, Ltd. firm is interested in entering into joint venture agreements in four areas with U.S. concerns. Sanitaryware has participated in successful joint ventures in the past and now seeks partners for the following four projects.

A proposed project for **ceramic machinery**, SIC-35595, would have total capitalization of $856,000 and a foreign exchange requirement of $132,000 including the custom machinery which would be imported. P-70894

A second project, still in the planning stage, will establish a plant to make **industrial porcelain**, SIC-3264, including electrical products. P-70895

Another proposal concerns establishing a plant to produce **graphite electrodes and anodes**, SIC-3624. This project would have a total capitalization of $5.5 million; an estimated $2.3 million in capital equipment and materials must be imported. The firm would like to establish a continuing technical and financial collaboration with a U.S. firm in return for a suggested 25-30% equity. P-70896

The final project is a plant to manufacture **graphite and silicon crucibles**, SIC-3297. Total capitalization is $658,000 with an estimated $264,000 worth of equipment being imported.

Write: H. L. Somany, Chairman, Hindustan Sanitaryware & Industries, Ltd., 2 Wellesley Place, P.O. Box 2359, Calcutta-1, West Bengal. Further details, including an annual report and brochure, and details on specific projects are available from the Office of International Investment, Dept. of Commerce, BIC-878, Washington, D.C. 20230. WTD.

Foreign Trade Opportunities

These trade opportunities are based on reports received from the U.S. Foreign Service by the International Liaison and Trade Opportunities Staff and the Bureau of Domestic Commerce (BDC), U.S. Department of Commerce, Washington, D.C. 20230. The commodities in which foreign firms are interested are indicated by the five-digit numbers and commodity classifications which are from the Standard Industrial Classification (SIC) Manual and the Numerical List of Manufactured Products, 1967 Census of Manufacturers used extensively by Government and industry.

U.S. firms should also be aware that the listing in *Commerce Today* of opportunities to trade in specific commodities and technical data does not necessarily imply approval of their export by the Department of Commerce pursuant to the Export Administration Act of 1969. Applicable export licensing regulations must be followed.

Every effort is made to include only firms or individuals with good reputations. However, the Department cannot be responsible for any trade relations.

The mark (•) indicates that this trade opportunity is a request for bids by a foreign government agency. A (★) at the end means that additional information may be borrowed by U.S. firms from the individual division of BDC. To avoid delays, requests for loan material should specify the country, commodity and foreign government agency.

WTD indicates that a World Trade Directory Report containing financial and business background information on the foreign firm is available for $2 from the U.S. Department of Commerce, BIC-924, Washington, D.C. 20230 or from any Commerce Field Office.

Direct Sales

Specific foreign firms have expressed interest in direct purchases of the products below. See also the "Agencies" listing.

Field crop farms

01120 — NETHERLANDS — Raw cotton. Direct purchase and/or agency for European continent. Kleingeld's Produce Agencies, Attn. J. Kleingeld (importer, agent/exporter), P.O. Box 648, Rotterdam. WTD 9/70.

Fruit, tree nut, vegetable farms

01226—AUSTRIA — California almonds, unpeeled, in bulk and/or packaged for retail. V O G GmbH (importer, dist.), Baeckermuehlweg 44, A-4010 Linz/D. WTD in prep.

Miscellaneous agriculture

01920—SOUTH AFRICA—Seeds: complete range, certified, field, garden, flower; bulbs. John Brockman & Co. Pty. Ltd. (importer, dist.), 9th Fl., Federal Bldg., Tulbagh Sq., Foreshore, P.O. Box 4820, Cape Town, Cape Province. WTD 1/70.

Small arms ammunition

19610—PAKISTAN—Small arms ammu-

nition. A. Hamid & Co., Ltd. (importer, dist., retailer), 3 Tollington Market, Shahrah-e-Quaid-e-Azam, Lahore. WTD 10/70.

Confectionery

20716 — SOUTH AFRICA — Shelled almonds: Californian cocktail, French fried, barbecued, other types; packed in 170 gram or 6 oz. tins. Direct purchase and sole franchise. J. Melnick & Co. (Pty.) Ltd. (importer, dist.), 43 Somerset Rd., P.O. Box 4098, Cape Town, Cape Province. WTD in prep.

Food preparations

20994—SINGAPORE—Dried yeast powder for use in making biscuits. Manager of Koh Hwee Ann (Pte) Ltd. (importer, retailer), 309 Beach Rd., Singapore 7. WTD in prep.

Broad woven fabric mills, manmade fiber, silk

22218 — CYPRUS — Printed polyester-nylon-cotton fabric suitable for ladies' night dresses, underwear. Supply samples, quote c.i.f. Cyprus. Mavros Industry Ltd., (importer, mfr.), 28 Passiades St., P.O. Box 1731, Nicosia. WTD 10/70.

22218—MAURITIUS—Shirting fabrics, manmade fiber, silk. Aurdally Bros. & Co. (importer, dist.), Lord Kitchener St., P.O. Box 370, Port Louis. WTD in prep.

Yarn, thread mills, products

22812—GERMANY—Cotton yarn combed cad. no. Ne 20, 24, 30, 40. Prices c.i.f. European ports. Gortz & Co. (importer, distributor), 86 Im Schlenk, 41 Duisburg-Wanheimerort WTD 9/70.

Textile goods

22940—NETHERLANDS—Cotton waste, linters. Direct purchase and/or agency for European continent. Kleingeld's Produce Agencies, Attn. J. Kleingeld (importer, agent/exporter), P.O. Box 648, Rotterdam. WTD 9/70.

Paper mills

26210—MALAYSIA—Approx. 10 tons high quality toilet tissue stock (2-ply), weight 21 grams, width 45", core 3", diameter 30" in assorted colors for conversion into rolls. Requests samples, price quotations c.i.f. Port Swettenham. Keng Yen & Co. (imp., dist., mfr.), 6 Lorong Haji Taib Satu, Kuala Lumpur. WTD 9/70.

Books

27312 — GERMANY — Scientific books dealing with economics, law. Eberhard Albert Universitaetsbuchhandlung Nachfolger (importer, retailer), 78 Freiburg i.B., Kaiser Joseph Strasse 179. WTD 9/70.

Industrial chemicals

28192 — THAILAND — Bleaching compounds for bleaching fabrics. Requests samples, c.i.f. Bangkok prices. Thai Tricot Co., Ltd., Attn: Surint Chayaphinant, Plant Mgr. (dist., mfr.), 297 Moo 1, Km. 34th, Tambol Bankpoo Mai, Amphur Muang, Samutprakarn. WTD in prep.

Drugs

28340—CYPRUS—Pharmaceutical preparations such as antibiotics, cortisones, etc. Quote c.i.f. Cyprus. Direct purchase & agency. Philipps Pharmaceutical House (importer, dist., agent), 223 Ledra St., P.O. Box 1476, Nicosia. WTD 10/70.

28340—ITALY—Pharmaceutical preparations for human use. Spadaro Ventura, S.p.A. (importer, mfr., retailer), Via Spadaro 7, 95124 Catania. WTD 10/70.

Paints, varnishes, lacquers, enamels

28511—GERMANY—Building paints for contractors, as dispersion paints, oil and synthetic resin paints; concrete protective paints. Paints to specifications; i.e. TT-E-489d Cl A before TT-P-30b or TT-S-176d Type I before TT-V-121e. Dr. Franz Boettiger KG (importer, dist., mfr.), 6050 Offenbach/Main, Buchhuegelallee 48. WTD 3/69.

28516 — GERMANY — Anti-corrosive paints for machines, iron construction work, tanks. Dr. Franz Boettiger KG (importer, dist., mfr), 6050 Offenbach/Main, Buchhuegelallee 48. WTD 3/69.

28517 — GERMANY — Furniture paints; canning tin lacquers, refrigerator lacquers, effect lacquers. Dr. Franz Boettiger KG (importer, dist., mfr.), 6050 Offenbach/Main, Buchhuegelallee 48. WTD 3/69.

28519 — GERMANY — Fire retardant paints; highway marking paints. Dr. Franz Boettiger KG (importer, dist., mfr.), 6050 Offenbach/Main, Buchhuelgelallee 48. WTD 3/69.

Gum, wood chemicals

28612—THAILAND—Dyestuffs for dyeing fabrics. Requests samples, c.i.f. Bangkok prices. Thai Tricot Co., Ltd., Attn: Surint Chayaphinant, Plant Mgr. (dist., mfr.), 297 Moo 1, Km. 34th, Tambol Bangpoo Mai, Amphur Muang, Samutprakarn. WTD in prep.

Luggage

31610 — QATAR — Luggage, aluminum, men's & women's train cases, pullman, overnight etc. Direct purchase and agency. The Modern Home (importer, agent, retailer), P.O. Box 615, Doha. WTD in prep.

Handbags, personal leather goods

31710 — JAPAN — Handbags, wallets, purses. Japan Trade Consultants (importer, dist.), Central P.O. Box 2047, Tokyo. WTD 2/70.

Abrasive, asbestos, nonmetallic mineral products

32932—KOREA—Manhole gaskets, gasket-casing cover, casing cover VS stuffing box, etc. all total 681 commodity, service items. Bid deadline Nov. 21. Specifications available from Trade Opp. Staff, BDC-541, Rm. 5877, Dept. of Commerce, Washington, D.C. 20230. Korea Electric Co., Attn: Overseas Purchasing Section (KECO) (gov't. agency), 5, 2-ka, Namdaemun-ro, Chung-Ku, Seoul. WTD in prep.

Steel mill products

● **33100—BURMA**—Supply of pipe & fittings, various sizes, quantities. Tender No. 25/10; bid deadline Nov. 15. Myanma Export Import Corp., Rangoon. Copies of tender documents available from Dir. Gen., Mineral Development Corp., Kanbe, Yankin, Rangoon.

● **33100 — INDIA** — 5,559 broad gage axles for railroad wagons, locomotives. Tender No. WTA-35 of 1970; bid deadline Nov. 9. Railway Stores, New Delhi. Copies of tender documents may be purchased from India Supply Mission, 2536 Massachusetts Ave., NW., Washington, D.C. 20008.

● **33100—IRAN** — 20,000 kgs. 26 cms. channeled iron of various specifications. Tender No. 1394-49; bid deadline, Dec. 7. Iranian State Railways, Tehran. Copies of tender documents available from Iranian Economics Mission, 2233 Wisconsin Ave., NW., Washington, D.C. 20007.

● **33100—PAKISTAN**—Supply of mild steel, Class II R.S. joists, Class II channels, tees, angles and plates of various specs. for railway bridge. Tender No. PR-1/70/BR/1; bid deadline, Nov. 11. West Pakistan Railway Board, Lahore. Copies of tender documents may be purchased from Secretary, Railway Board, P.W.R. Headquarters, Empress Rd., Lahore.

33120 — BRAZIL — Stainless steel 304-18/8 in strips (preferably) or sheets, from 1.5mm to 2.2mm thick. Requests c.i.f. prices Port of Santos, delivery terms. Correspondence requested in Spanish, Italian or Portuguese. Metalurgica Pacetta S.A. (mfr.), Rua Comendador Guimaraes 809, Caixa Postal 10, Amparo, State of Sao Paulo. WTD 9/70.

Rolling, drawing, extruding of nonferrous metals

● **33500 — ARGENTINA** — Aluminum cable for 220/380 v, 50 C/S aerial distribution lines: 738,000 meters, 7 strand, 25 mm² section; 226,000 meters, 7 strand, 50 mm² section; 80,000 meters, 19 strand, 95 mm² section; 498,000 meters, 7 strand, 50 mm² section, PVC covered. Copper cable for 220/380 v, 50 C/S aerial distribution lines; 800,000 meters, 10 mm² section; 64,000 meters, 19 strand, 70 mm² section. Bid deadline Nov. 11; IDB financed. Specifications/conditions available for tender 3089 for A50 pesos (about $12.50) from Segba, Officinas Compras Exterior, Balcarce 184, Buenos Aires.

● Supply of cable, PVC insulated of various quantities, sizes. Tender No. 3081; Bid deadline Nov. 11. Segba, Oficinas Compras Exterior, Balcarce 184, Buenos Aires.

● **33500 — PERU** — Supply of copper cable for electrical transmission. Bid deadline Dec. 16. Contact Empresas Electricas Asoriadas, Servicio de Compras, Oficina, 308, Veracruz 261, Casilla 1384, Lima.

33522—LIBERIA—Ten tons ⅛ to 1/16" aluminum sheet. Shipment must be received by Mar. 31, 1971. C.i.f. prices, terms, catalogs requested. Mezbau, Inc. (importer, dist., mfr.), P.O. Box 1023, Dock Rd., Monrovia. WTD in prep.

33524 — LIBERIA — Anodized aluminum profiles, 34 tons, 20' lengths, natural and various colors. Shipment must be received by Mar. 31, 1971. C.i.f. prices, terms, catalogs requested. Mezbau, Inc. (importer, dist., mfr.), P.O. Box 1023, Dock Rd., Monrovia. WTD in prep.

Cutlery, hand tools, hardware

34231—GERMANY—Wrenches, all kinds new to the market. C.i.f. European ports. Walter, Carl Schraubenwerkzeugfabrik (dist., mfr., exporter), 82 Hahnerberger Strasse, Postfach 17, 56 Wuppertal-Hahnerberg. WTD 11/69.

Fabricated structural metal products

● **34400—BOLIVIA** — Fabricated metal shapes for the Santa Cruz-Rio Mamore

bridge, part of the Yacuiba-Santa Cruz-Rio Mamore-Sucre Railway. Estimated value of Tender No. 8-70 is $400,000. Specifications may be obtained for b$ 500 (app. $42) from: Comision Mixta Ferroviaria Argentino-Boliviana, Avenida 16 de Julio "Edificio Avenida" 8o. Piso, P.O. Box 1430, La Paz. The Comision is a joint agency of the Argentine and Bolivian Governments.

Coating, engraving, allied services

34710 — PAKISTAN — Electroplating, polishing materials. Ida Traders (importer, mfr.), Ida Bldg., Abbot Rd., Sialkot. WTD 9/70.

Engines, turbines

● 35100—TRINIDAD—Supply and installation 75 MGW steam turbine generator and turbo-alternator. Unit will be known as "Unit No. 4, Port of Spain 'B' Power Station." Bid deadline Dec. 31. Specifications available from Purchasing Officer, Trinidad & Tobago Electricity Commission, 63 Frederick St., Port of Spain, Trinidad, W. I.

● 35100 — URUGUAY — Supply one 100,000 KW thermal power generating unit. Specifications include Volume I, a description of project and Volumes II-X consisting specifications with charts in Volumes V and VIII; bid deadline Dec. 14. IBRD financing. Specifications available for U.S.$53 a set from Sr. Jefe, Seccion Licitaciones UTE, Palacio de la Luz, Montevideo.

Construction, mining, materials handling machinery, equipment

● 35300—TAIWAN—Dredger, one complete unit of 4 m³ diesel electric dipper type. Tender No. FL2C-4003; bid deadline Dec. 1; financing by Asian Development Bank. Central Trust of China, Purchasing Dept., 49 Wuchang St., Sec. 1, Taipei. Review copy of terms & specifications available in the General Industrial Equip. Div., Dept. of Commerce, BDC, Room 5898C. Wash., D.C. 20230 (202-967-5566).

● 35300 — TURKEY — Ninety crawler tractors, 160 hp diesel; 33 crawler tractors, 120 hp diesel; 35 crawler tractors, 70 hp diesel; six crawler tractors, 70 hp ments (dozers, winches, etc.): 74 air diesel; all with various types of attachcompressors, 60 hp diesel engine, 190 CFM; 37 motor graders, 4 x 4 or 6 wheel tandem, 115 hp diesel; 23 crawler tractor shovel-loaders, 1¾ cu. yd. bucket; nine truck tractors and semi-trailers, 210 hp diesel; 46 shop trucks, 75 hp diesel; 14 welding trucks; 119 pick-up trucks; 16 log loading trucks; 11 cableway trucks; three cableway trucks; 50 chain saws; 10 debarking machines; 16 rubber-tired tractors, 50 hp diesel with logging arch. Various bid deadlines from Nov. 16-Nov. 23; detailed specifications available from Modern Translation Bureau, Karanfil Sokak 49/1, Ankara, for $4, airmail for each item.

35370 — KOREA — Battery fork lift trucks, engine fork lift trucks, hand carts, belt conveyors, other commodities. Bid deadline Nov. 30. Tender documents available for review in Trade Opp. Staff, BDC-541, Rm. 5877, Dept. of Commerce, Washington, D.C. 20230. Korea Cold Storage Co., Ltd. (importer, cold storage firm, gov't agency), 13-8 Noryangjin-dong, Yungdungpo-ku, Seoul. WTD in prep.

Metalworking machinery

● 35400—INDIA—Two sets of air-driven boiler tube cleaners for curved tubes (38.1 mm O.D. and 33.0 mm I.D.); four sets of boiler water level glass gages, and 20 sets of glass Klinger-type gages. Tender No. 1172/BPO/PR/10877/W-1368; bid deadline Dec. 17. V. K. Yashroy, Chief Purchase Officer, Beas Purchase Org., Talwara Township, Hoshiarpur, Punjab. Tender copy is available from Metalworking Equip. Div., BDC, Dept. of Commerce, Washington, D.C. 20230 (202-967-5652). A review copy is available at the Commerce Field Office, 11444 Federal Office Bldg., 450 Golden Gate Ave., San Francisco, Calif. 94102 (415-556-5868).

35482 — NETHERLANDS — Attachments and auxiliary tools for pneumatic tools and machines such as boring heads, grinders, chisels, similar equipment. Exclusive sales rights. N.V. R.A.M.I. (importer, dist.), 141 De Ruyterkade, Amsterdam. WTD 10/70.

Special industry machinery

35521—KOREA—High-speed false twister, with standard accessories, equip.; high-speed doubling twister, with standard accessories, equip.; precision cone winder with standard accessories, equip. Bid deadline Nov. 11. Specifications available from Trade Opp. Staff, BDC-541, Rm. 5877, Dept. of Commerce, Washington, D.C. 20230. Technical Services Dept., The Medium Industry Bank-MIB (for Il Shin Enterprise Co.), 36, 2-ka, Ulchi-ro, Chung-ku, Seoul. WTD in prep.

35590—KOREA—Electric arc furnace; low frequency induction furnace; hydro blaster, other items. Specifications available from Trade Opp. Staff, BDC-541, Rm. 5877, Dept. of Commerce, Washington, D.C. 20230. Kangwon Industrial Co., Ltd. (importer, exporter), 6, 2-ka, Shinmoon-ro, Chongno-ku, Seoul. WTD in prep.

35593 — TURKEY — Complete extrusion equipment for casting, sheeting polyethylene, PVC, polystyrene, and laminating same with paper or aluminum foil. Capacity 250 meters/minute, based on 8-hr. working day; coating width 40-42". OR Kirtasiye Sanayii ve Ticaret Ltd. (mfr.), Buyuk Langa, Karakol Sokak 4/C, Aksaray. WTD 9/70.

35595 — GAMBIA — Requests literature, price quotations for one rice mill, small to medium capacity. Gambia Oilseeds Marketing Board (government agency), Marina Foreshore, Bathurst.

35595—KOREA—Machinery for water proof abrasive paper roll manufacturing plant. Bid deadline Nov. 10. Specifications available from Trade Opp. Staff, BDC-541, Rm. 5877, Dept. of Commerce, Washington, D.C. 20230. Technical Services Dept., The Medium Industry Bank-MIB, for O-Shung Abrasive Mfg. Co., Ltd. (importer, mfr.), 36, 2/ka, Ulchi-ro, Chung-ku, Seoul.

Office, computing, accounting machines

● 35700 — PHILIPPINES — Supply of weighing scales for livestock with accessories. Equipment to be used in university's agricultural training project sponsored by the UNESCO and financed by the UNDP. Requests brochures and price quotations. Invited by the Central Luzon State University, Munoz, Nueva Ecija, Philippines. Attention: Dr. K. A. Alim, UNESCO.

35733—GERMANY—EDP periphery and data communication equipment; computer graphic equipment, computer components. Reichert Elektronik GmbH & Co. KG (importer, dist., mfr.,), 5500 Trier, Postfach 743. WTD 6/70.

Service industry machinery

● 35800—TURKEY—Supply of 600 fuel pumps, manually crankable, liter and money registering fuel dispensing type, 50 lt/min capacity, ¾" diameter x 4 m long dispensing hose with automatic nozzle, 1/3 HP, 220-110 V, 50 Hz motor. Bid deadline Nov. 11. Bid bonds: TL 300,000; performance bond 10%; option 8 months; prices FOB and CF Istanbul; payment L/C. Dir. Gen., Petrol Ofici Genel Mudurlugu, Muhaberat ve Arsiv Sube Mudurlugu, Ankara. Specifications available at U.S. $4 each airmail from the Modern Translation Bureau, Karanfil Sokak 49/1, Ankara.

35857 — ISRAEL — Complete package plant for installation of ice-skating rink. Furman Assoc. Ltd. (investment bankers), P.O. Box 29305, Shalom Tower Bldg., Tel Aviv. WTD in prep.

Machinery

35990—GERMANY—Control valves; oil filters. Prices c.i.f. Hamburg or Bremen. Direct purchase and agency. V.I.A. Vertretungsbuero fuer industrielle Ausstattugen GmbH (importer, agent, exporter), 56 Gneisenaustrasse, 4 Duesseldorf. WTD 8/70.

Electric transmission, distribution equipment

● 36100—INDIA—Supply a testing machine to conduct various direct current tests on pulsating current traction motors; equipment should include transformer, switchgears, resistors, D.C. generators, control boards, control desks, measuring instruments, and dielectric test set. Tender No. C1/NS/M&P/70-71/C/746; bid deadline Jan. 12. Bids invited by and tender documents available at U.S. $3.34 per copy, excluding postage, from Controller of Stores, Chittaranjan Locomotive Works, 4 Chittaranjan Avenue, Calcutta 13, West Bengal. Review copy of specifications available for inspection, not loan, at the Scientific & Business Equip. Div., Rm. 4120, BDC-653, Dept. of Commerce, Washington, D.C. 20230 (202-967-2939).

● 36100—THAILAND—Supply one set indoor metal-clad switchgear 3.3 Kv. Tender No. MEA-PSD-212; bid deadline Nov. 19. Purchase & Stores Dept., Metropolitan Electricity Authority, 121 Chakraphet Rd., Bangkok 2. Specs. at Dept. of Commerce, BDC, Room 5886C, Washington, D.C. 20230 (202-967-4188).

36130 — SWITZERLAND — Proximity switches, contactless initiators, contactless push button switches. Digitron AG, Attn: J. P. Kocher (importer, mfr.), P.O. Box 2555-Brugg. WTD in prep.

36110—GERMANY—Measuring and control equipment. Prices c.i.f. Hamburg or Bremen. Direct purchase & agency. V.I.A. Vertretungsbuero fuer industrielle Ausstattungen GmbH (importer, agent, exporter), 56 Gneisenaustrasse, 4 Duesseldorf. WTD 8/70.

Household appliances

36321—SPAIN — Household refrigera-

tors, including combination refrigerator-freezers. Montesa, S.A. (importer, dist., retailer), Velazquez, 48, Madrid (1). WTD 8/70.

36322—SPAIN — Home, farm freezers. Montesa, S.A. (importer, dist., retailer), Velazquez, 48, Madrid (1). WTD 8/70.

36341—SPAIN—Electric fans, except industrial type. Montesa, S.A. (importer, dist., retailer), Velázquez, 48, Madrid (1). WTD 8/70.

Electric lighting, wiring equipment

● 36400—THAILAND—Supply 140 units of epoxy-glass crossarm for 115 Kv lattice-steel pole including fittings. Tender No. MEA-PSD-213; bid deadline Nov. 26. Purchase & Stores Dept., Metropolitan Electricity Authority, 121 Chakraphet Rd., Bangkok 2. Specifications available from U.S. Dept. of Commerce, BDC, Room 5886-C, Washington, D.C. ★(202-967-4241).

● Supply 24 single pole of 60 Kv station valve lightning arresters. Tender No. MEA-PSD-211; bid deadline Nov. 12. Purchase & Stores Dept., Metropolitan Electricity Authority, 121 Chakraphet Rd., Bangkok 2. Specifications available from U.S. Dept. of Commerce, BDC, Room 5886C, Washington, D.C. 20230 (202-967-4188).

36430—GERMANY — Pressure switches. Prices c.i.f. Hamburg or Bremen. Direct purchase & agency. V.I.A. Vertretungsbuero fuer industrielle Ausstattungen GmbH (imp., agent, exporter), 56 Gneisenaustrasse, 4 Duesseldorf. WTD 8/70.

Communication equipment

36625—SPAIN—Fire control equipment, except optical systems. Petroleum Fire Protection Espanola, S.A. (importer, dist.), Dr. Fleming, 53, Madrid (16). WTD 8/70.

Electronic components, accessories

36749—SWITZERLAND — Photoelectric cells for industrial controls. Digitron AG (importer, mfr.), Attn: J. P. Kocher, P.O. Box 2555-Brugg. WTD in prep.

36790 — SWITZERLAND — Proximity switches, contactless initiators, contactless push button switches, photocells for electronic controls. Digitron AG (importer, mfr.), Attn: J. P. Kocher, P.O. Box 2555-Brugg. WTD in prep.

Electrical machinery, equipment

36930—NETHERLANDS—X-ray equipment. Exclusive agency. Portanje Medical Electronics (importer, dist.), 156 Gansstraat, Utrecht. WTD 10/70.

Motor vehicles, equipment

37130—KOREA—Eight ton refrigeration van truck; 4 ton cooling van truck; 15 ton refrigeration van trailer truck. Bid deadline Nov. 30. Tender documents available for review in trade Opp. Staff, BDC-541, Rm. 5877, Dept. of Commerce, Washington, D.C. 20230. Korea Cold Storage Co., Ltd. (importer, cold storage firm, gov't agency), 13-8 Noryangjin-dong, Yungdungpo-ku, Seoul.

Engineering, laboratory, scientific, research instruments

● 38100—BURMA—Supply micro hardness testing device, mirror stereoscope, 35 mm. vertical camera with accessories, daylight developing machine, airborne scintillometer, intervalometer, radioaltimeter, power supply (210-250 V) with spare. Tender No. 20/01; bid deadline Nov. 10. Invited by the Dir. Gen., Mineral Development Corp., Rangoon. Terms and specifications on loan from Scientific & Business Equip. Div., BDC-653, Dept. of Commerce, Washington, D.C. 20230 ★ (202-967-2939). Review copy will be available at the Commerce Field Office, 11444 Federal Bldg., 450 Golden Gate Ave., San Francisco, Calif. 94102 (415-556-5868).

38112 — NETHERLANDS — Electronic medical, laboratory equipment. Exclusive agency. Portanje Medical Electronics (importer, dist.), 156 Gansstraat, Utrecht. WTD 10/70.

Instruments for measuring, controlling, indicating physical characteristics

● 38200 — COSTA RICA — Supply of 3,600 water meters, magnetic or mechanical displacement type, as follows: 3,100 meters, size ⅝"; 350 meters, size ¾"; 150 meters, size 1"; plus replacements; 3,450 protection boxes and accessories for above meters; machinery, instruments and accessories to equip water meter repair, maintenance and testing shop. Tender No. Licitation Publica No. 213; bid deadline Nov. 23. SNAA will consider offers only for U.S.-made articles or of U.S. origin and in accordance with loans made by AID or ExImbank. Departmento de Servicios Generales, Seccion de Proveeduria, Servicio Nacional de Acueductos y Alcantarillado, Apartado 5120, San Jose. Terms and specifications in Spanish on loan from the Scientific & Business Equip. Div., BDC-653, Dept. of Commerce, Washington, D.C. 20230 ★ (202-967-2939). Review copy at the Commerce Field Office, 11444 Federal Bldg., 450 Golden Gate Ave., San Francisco, Calif. 94102 (415-556-5868).

38216—NETHERLANDS—Nuclear electronic equipment for medical application. Exclusive agency. Portanje Medical Electronics (importer, dist.), 156 Gansstraat, Utrecht. WTD 10/70.

38216—SPAIN — Fire detecting devices. Petroleum Fire Protection Espanola, S.A. (importer, dist.), Dr. Fleming, 53, Madrid (16). WTD 8/70.

Surgical, medical, dental instruments

38430—NETHERLANDS—Dental equipment, supplies, including ultrasonic cleaning equipment. Direct purchase or representations. Keur & Snieltoes Dental Depot (importer, dist.), 1 Kenaupark, Haarlem. WTD 9/70.

38430—NETHERLANDS—Dental instruments, burrs, impression and filling materials, equipment. Direct purchase or exclusive agency. N.V. voorheen Firma Tjaden & Co. (importer, dist., retailer), 23 Westerkade, Utrecht. WTD 10/70.

Photographic equipment

38611—KOREA—35mm single head continuous printer, 16mm single head continuous printer, etc., 49 items of motion picture laboratory equipment, facilities. Bid deadline Nov. 14. Specifications available from Trade Opportunities Staff, BDC-541, Rm. 5877, Dept. of Commerce, Washington, D.C. 20230. Technical Services Dept., the Medium Industry Bank-MIB for Saehan International Co., Ltd. 36, 2-ka, Ulchi-ro, Chung/ku, Seoul.

Toys, amusement, sporting goods

39493—GERMANY — Shooting ranges, sporting and hunting type; bowling alleys, bowling alley playing supplies. Direct purchase & agency. Ernst K. Spieth (mfr., exporter), 7301 Zell a. Neckar, Alleenstrasse 39. WTD 10/70.

Pens, pencils, office, artists' materials

39510—QATAR—Pens, fountain pens. Direct purchase & agency. The Modern Home (importer, agent, retailer), PO Box 615, Doha. WTD in prep.

Costume jewelry, novelties, buttons, notions

39642—GERMANY—Buckles for leather belts, belts of other materials. Hans Landes- Lederwarenfabrik (importer, mfr., exporter), 56 Achenerweg, D-7972 Isny/Allgaeu, Baden-Wuerttemberg. WTD 10/70.

Manufacturing industries

39991—SPAIN — Fire extinguishing equipment and parts, chemical and others. Petroleum Fire Protection Española, S.A. (importer, dist.), Dr. Fleming, 53, Madrid (16). WTD 8/70.

39993—JAPAN—Metal handbag frames. Japan Trade Consultants (importer, dist.), Central P.O. Box 2047, Tokyo. WTD 2/70.

Agencies

Specific foreign firms have expressed interest in agency agreements for the products listed below. Exclusive agencies for these products are wanted only if specified.

Field crop farms

01137—NETHERLANDS—Lawn grasses, such as bentgrasses, chewings; alfalfas, red, white & Dixie crimson clover seeds. Brokerage arrangements requested for W. Europe. J. B. Burgers Zaadteelt & Zaadhandel (agent), 275 Wolfkuilseweg, P.O. Box 5, Nimegen. WTD in prep.

Fruit, tree nut, vegetable farms

01226—AUSTRIA—Edible tree nuts in bulk for use by food industry. F. J. Elsner & Co. (importer, agent, export, transit), Marktgraben 25, P.O.B. 68, A-6020 Innsbruck. WTD in prep.

Canning, preserving foods

20310—AUSTRIA—Dehydrated seafoods, e.g. shrimp, crabs, fish, etc., for use by food industry. F. J. Elsner & Co. (importer, agent, export, transit), Marktgraben 25, P.O.B. 68, A-6020 Innsbruck. WTD in prep.

20320—FINLAND — Canned specialty foods, suitable for sale to restaurants, large catering organizations. Oy Wald. Tefke Ab Jussi Nahkuri, Man. Dir. (agent), Ruoholahdenkatu 22, Helsinki 18. WTD 6/70.

20330—FINLAND — Canned fruits, vegetables, suitable for sale to restau-

rants, catering businesses. Oy Wald. Tefke Ab Jussi Nahkuri, Man. Dir. (agent), Ruoholahdenkatu 22, Helsinki 18. WTD 6/70.

20340—FINLAND—Dried fruits, vegetables, suitable for sale to restaurants, catering businesses. Oy Wald. Tefke Ab Jussi Nahkuri, Man. Dir. (agent), Ruoholahdenkatu 22, Helsinki 18. WTD 6/70.

20341—AUSTRIA—Dried, dehydrated, or freeze dried fruits. F. J. Elsner & Co. (importer, agent, export, transit), Marktgraben 25, P.O.B. 68, A-6020 Innsbruck. WTD in prep.

20342—AUSTRIA—Dried, dehydrated, or freeze dried soup mixes in bulk for further processing. F. J. Elsner & Co. (importer, agent, export, transit), Marktgraben 25, P.O.B. 68, A-6020 Innsbruck. WTD in prep.

20350—FINLAND—Pickles, sauces, salad dressings, suitable for sale to restaurants, catering businesses. Oy Wald. Tefke Ab Jussi Nahkuri, Man. Dir. (agent), Ruoholahdenkatu 22, Helsinki 18. WTD 6/70.

20360—FINLAND—Frozen and fresh packaged fish, other seafood, suitable for sale to restaurants, catering businesses. Oy Wald. Tefke Ab Jussi Nahkuri, Man. Dir. (agent), Ruoholahdenkatu 22, Helsinki 18. WTD 6/70.

20370—FINLAND—Frozen fruits, vegetables and specialties suitable for sale to restaurants and catering businesses. Oy Wald. Tefke Ab Jussi Nahkuri, Man. Dir. (agent), Ruoholahdenkatu 22, Helsinki 18. WTD 6/70.

Grain mill products

20422—NETHERLANDS—Additives for cattle feeds. Keyser & Mackay (importer, dist., agent), 19 Leidsegracht, Amsterdam. WTD 9/70.

20422—SWITZERLAND—Raw materials for livestock feeds, supplements, concentrates. Sugro AG (importer, dist., agent), Attn: Dr. R. E. Eisenhart, Sevogelstr. 21, 4002-Basel. WTD in prep.

Confectionery

20716 — FINLAND — Nuts; salted, roasted, cooked, etc. suitable for sale to restaurants. Oy Wald. Tefke Ab Jussi Nahkuri, Man. Dir. (agent), Ruoholahdenkatu 22, Helsinki 18. WTD 6/70.

Beverage industries

20871 — SWITZERLAND — Flavors, essences. Sugro AG (importer, dist., agent), Attn: Dr. R. E. Eisenhart, Sevogelstrasse 21, 4002-Basel. WTD in prep.

20872—AUSTRIA — Liquid beverage bases in bulk. F. J. Elsner & Co. (importer, agent, export, transit), Marktgraben 25, P.O.B. 68, A-6020 Innsbruck. WTD in prep.

20873—AUSTRIA—Flavoring sirups for use by soft drink bottlers. F. J. Elsner & Co. (importer, agent, export., transit), Marktgraben 25, P.O.B. 68, A-6020 Innsbruck. WTD in prep.

20874—AUSTRIA — Flavoring concentrates, powders, pastes; food colorings; concentrated fruit juice products. F. J. Elsner & Co. (importer, agent, export, transit), Marktgraben 25, P.O.B. 68, A-6020 Innsbruck. WTD in prep.

Textile goods

22952—ENGLAND—Imitation leathercloths for upholstery, handbags, luggage; upholstery, curtain cloths. J. Davies (Shippers) Ltd. (importer, agent), 9, Evelyn House, 62, Oxford St., London W1N 9LB. WTD in prep.

Prefabricated wood products

24331—SPAIN—Ceilings, wood. Jose A. Navarro Chulvi (agent), Avda. Perez Galdos, 70, Valencia (8). WTD 4/70.

Wood products

24992—NETHERLANDS—Wood box pallets for packaging, transportation purposes. Agencies for W. Europe. ALDASCO N.V. Attn: L.A.F.M. Dassen, Mgr. (importer, agent/exporter), 224a Aalsterweg, or P.O. Box 850, Eindhoven. WTD 9/70.

Partitions, shelving, lockers

25410—SPAIN—Partitions, wood. Jose A. Navarro Chulvi (agent), Avda. Perez Galdos, 70, Madrid (8). WTD 4/70.

25420—SPAIN—Partitions, metal. Jose A. Navarro Chulvi (agent), Avda. Perez Galdos, 70, Valencia (8). WTD 4/70.

Paperboard containers, boxes

26530—NETHERLANDS—Fiber board box pallets for packaging, transportation purposes. Agencies for W. Europe. ALDASCO N.V. Attn: L.A.F.M. Dassen, Mgr. (importer, agent/exporter), 224a Aalsterweg, or PO. Box 850, Eindhoven. WTD 9/70.

26530—SPAIN—Partitions, corrugated, solid fiber paperboard. Jose A. Navarro Chulvi (agent), Avda. Perez Galdos, 70, Valencia (8). WTD 4/70.

Industrial chemicals

28180 — SWITZERLAND — All kinds of industrial organic chemicals, raw materials for food, feed industries. Sugro AG (importer, dist., agent), Attn: Dr. R. E. Eisenhart, Sevogelstr. 21, 4002-Basel. WTD in prep.

28185—NETHERLANDS—Chemicals for cosmetics industry. Keyser & Mackay (importer, dist., agent), 19 Leidsegracht, Amsterdam. WTD 9/70.

28190—SWITZERLAND—All kinds of industrial inorganic chemicals, raw materials for food, feed industries. Sugro AG (importer, dist., agent), Attn: Dr. R. E. Eisenhart, Sevogelstr. 21, 4002-Basel. WTD in prep.

Synthetic materials

28210—ENGLAND—PVC, polymers, copolymers, polyethylene, polypropylene. K. W. Chemicals, Ltd. (dist.), Caroline House, 55/57 High Holborn, London, WC1V CEF. WTD 9/70.

28210 — SWITZERLAND — All kinds of plastics materials, resins. Sugro AG (importer, dist., agent), Attn: Dr. R. E. Eisenhart, Sevogelstr. 21, 4002-Basel. WTD in prep.

Drugs

28340—ISRAEL—Pharmaceutical preparations, all kinds, for human use. Exclusive agency. Milchan Bros. Ltd. (importer, dist., agent), 19 Carlebach St., Tel Aviv. WTD 6/70.

Agricultural chemicals

28790—CYPRUS—Insecticidal and fungicidal preparations primarily for agricultural use such as lead arsenate, malathion, parathion, fenitrothion, B.H.C., etc. Quote c.i.f. Cyprus. O. G. Chakarian Ltd. (importer, dist., agent), Roicos St., P.O.B. 1507, Nicosia. WTD in prep.

Chemical products

28993—SWITZERLAND—Essential oils, all kinds. Sugro AG (importer, dist., agent), Attn: Dr. R. E. Eisenhart, Sevogelstr. 21, 4002-Basel. WTD in prep.

Iron, steel foundries

33211—SPAIN—Molds for heavy steel ingots. Toro & Betolaza, S.A. (agent), San Vicente, Edificio Albia, Bilbao 1. WTD 8/70.

Fabricated structural metal products

34443—SPAIN — Ceilings and domes, sheet metal. Jose A. Navarro Chulvi (agent), Avda. Perez Galdos, 70, Valencia (8). WTD 4/70.

Metal stampings

34610—PAKISTAN—Steel helmets made of steel capable withstanding .303 bore rifle fire. Requests catalogs, quotations, c. & f., Karachi. Industrial Contracting & Trading Co. (agent), 13, Gulshan Terrace, Bunder Rd., P.O. Box 549, Karachi. WTD 1/70.

Fabricated metal products

34944—AUSTRALIA — Valves: check; directional (single and banked); pressure relief; flow control; pilot operated; sequence; unloading. Johns & Waygood Ltd. Attn. J. R. Kennedy (importer, dist., mfr.), P.O. Box 20, City Rd., South Melbourne 3205, Victoria. WTD in prep.

Engines, turbines

35112—AUSTRALIA—Low torque high speed hydraulic motors; high torque low speed hydraulic motors. Johns & Waygood Ltd. Attn.: J. R. Kennedy (importer, dist., mfr.), City Rd., P.O. Box 20, South Melbourne 3205, Victoria. WTD in prep.

35191—URUGUAY—Gasoline engine: 4-stroke, air cooled, cast steel block; power: 1 to 5 hp. 1,600 to 3,600 rpm. Exclusive agency. Storer & Cia. S. A. Uruguaya (importer, agent), Mercedes 1312, Montevideo. WTD 10/70.

Farm machinery

35227 — GERMANY — Lawn mowers, edgers, sweepers, other types of lawn maintenance equipment, machinery. Prices c.i.f. European ports. Landre & Glindermann GmbH (importer, distributor, agent), 4 Borkstrasse, 44 Muenster (Westfalen). WTD 8/70.

Metalworking machinery

35420—GERMANY — Machine tools. Ing.Buero Heinz Kraft (agent), 7 Stuttgart 1, Kornbergstrasse 18. WTD 9/70.

35442—SPAIN—Molds, industrial. Toro & Betolaza, S.A. (agent), San Vicente, Edificio Albia, Bilbao 1. WTD 8/70.

Special industry machinery

35552—JAPAN—Printing machinery for plastic containers of beer & soft drink bottles. Orient Trading Co. Ltd. Attn:

Shigeo Furuya, Dir. (dist., agent), Sanno Grand Bldg., 2-14-2 Nagata-cho, Chiyoda-ku, Tokyo. WTD 10/70.

35591 — NETHERLANDS — Filters, equipment for chemical industries. Keyser & Mackay (importer, dist., agent), 19 Leidsegracht, Amsterdam. WTD 9/70.

35592—GERMANY — Foundry equipment. Ing.Buero Heinz Kraft (agent), 7 Stuttgart 1, Kornbergstrasse 18. WTD 9/70.

35592 — SPAIN — Molding machines, foundry. Toro & Betolaza, S.A. (agent), San Vicente, Edificio Albia, Bilbao 1. WTD 8/70.

General industrial machinery

35610—ENGLAND — Flexible couplings for pipes, from 1"-12" used in construction industry & irrigation. Goodenough Pumps Ltd. (mfr., agent), 39, Jermyn St., London S.W.1. WTD in prep.

35612—AUSTRALIA — Variable and fixed delivery pumps; type - reservoir submersible - externally mounted; capacity - to 150 GPM and possible to 200 GPM; pressure - continuous operating pressures 2500 to 3000PSI; also 5000 PSI and above. Johns & Waygood Ltd. Attn.: J. R. Kennedy (importer, dist., mfr.), City Rd., P.O. Box 20, South Melbourne 3205, Victoria. WTD in prep.

Office, computing, accounting machines

35731—SWITZERLAND—Numerical controls for machine tools. Selectron AG (importer, dist., mfr.), Bernstrasse 88, 3250 Lyss. WTD in prep.

Service industry machines

35851—SWITZERLAND — Air-conditioning systems. Universal AG (importer, dist., mfr.), Attn: W. Knoepfli, Hofackerstrasse 13, CH-8032 Zurich. WTD 1/70.

35852—SWITZERLAND — Air-conditioning equipment; room, unitary. Universal AG (importer, dist., mfr.), Attn: W. Knoepfli, Hofackerstrasse 13, CH-Zurich. WTD 1/70.

35854 — SWITZERLAND — Refrigeration, air-conditioning compressors, parts. Universal AG (importer, dist., mfr.), Attn: W. Knoepfli, Hofackerstrasse 13, 8032-Zurich. WTD 1/70.

Electrical industrial apparatus

36220—SWITZERLAND—Numerical controls for machine tools. Selectron AG (importer, dist., mfr.), Bernstrasse 88, 3250 Lyss. WTD in prep.

Electric lighting, wiring equipment

36430—SWITZERLAND — Miniature 24 hr. switches for industrial, domestic use; electronic timers up to 15 min. time interval. Request replies from mfr. only. Walter Ohr AG (importer, dist.), Neuackerstrasse 57, 8125-Zollikerberg. WTD 9/69.

Communication equipment

36623 — HONG KONG — Burglar alarm systems. Hong Kong L.P. Gas Co., Ltd. (importer, dist., agent), 40 Waterloo Rd., 2nd Fl., Kowloon. WTD in prep.

Electronic components, accessories

36795—SWITZERLAND — Miniature 24 hr. switches for industrial and domestic use; electronic timers up to 15 min. time interval. Requests replies from mfr. only. Walter Ohr AG (importer, dist.), Neuackerstrasse 57, 8125-Zollikerberg. WTD 9/69.

Electrical machinery, equipment, supplies

36930—PHILIPPINES — One electroshock or ETC machine. Marsman & Co., Inc. (importer, dist., agent), Mary A. Marsman Bldg., Buendia Ave., Makati, Rizal. WTD 5/70.

Motor vehicles, motor vehicle equipment

37141—GERMANY—Parts, accessories of all kinds for passenger cars, trucks. Prices c.i.f. European ports. Bronnold, Paul (agent), 68 Weissenburgstrasse, 4 Duesseldorf. WTD 10/70.

Ship building, repairing

37323—AUSTRIA — Unsinkable sail boats with a minimum length of 14 ft., suitable for transportation on top of passenger cars, including sail, other gear. Intertechno Import / Export HandelsgesmbH (importer, retailer, repairer), Biemergasse 11, A-1010 Vienna. WTD in prep.

Engineering, laboratory, scientific, research instruments

38112—GERMANY — Laboratory instruments for measuring, analyzing, chemical proceedings. Instrumentsfabriek & Handel v/h P. J. Kipp & Zonen, Vertriebs GmbH (importer, dist., agent), 5 Wiesenau, 6242 Schoenberg/Ts. WTD 9/70.

38112—PHILIPPINES—Two haemodialysis units. Marsman & Co., Inc. (importer, dist., agent), Mary A. Marsman Bldg., Buendia Ave., Makati, Rizal. WTD 5/70.

38112—SPAIN — Laboratory, scientific instruments. Toro & Betolaza, S.A. (agent), San Vicente, Edificio Albia, Bilbao 1. WTD 8/70.

Instruments for measuring, controlling, indicating physical characteristics

38213—AUSTRALIA — Controls for pumps: manual servo; remote pilot control; pressure compensating control. Johns & Waygood Ltd. Attn.: J. R. Kennedy (importer, dist., mfr.), City Rd., P.O. Box 20, South Melbourne 3205, Victoria. WTD in prep.

38213—GERMANY—Measuring, controlling instruments, equipment for pulp, paper industry, i.e. viscosimeters, moisture measuring equipment, etc. Paul Lippke KG (importer), 12 Wilhelm Leuschner Str., 5450 Neuwied. WTD 9/70.

38216—GERMANY — Instruments measuring physical characteristics. Instrumentfabriek & Handel v/h P. J. Kipp & Zonen, Vertriebs GmbH (importer, dist., agent), 5 Wiesenau, 6242 Schoenberg/Ts. WTD 9/70.

Surgical, medical, dental instruments

38421—ISRAEL — Chemically-cooled compress in bags for application to bruises, sprains to reduce swelling, pain. Besserglick Bros. Ltd. (importer, mfr., services), 1 Haharash St., Tel Aviv. WTD in prep.

Other Foreign Official Tenders

AUSTRALIA—Tenders are invited by the Maritime Services Board, New South Wales, for Stage 1 (Contract No. 70/31) of a scheduled four-stage development to Botany Bay as a second port and industrial area for Sydney. Work includes 1) dredging entrance channels and port areas; 2) reclamation of 300 acres including 16 million cubic yards of sand, with alternative proposal for an additional reclamation of 220 acres including 6 million cubic yards of sand fill; 3) construction of main rock fill enbankment approximately 5,800 feet in length with rock filter layers and concrete tri-bar armouring; 4) construction of secondary stone embankments and revetments approximately 6,000 feet total length with rock armouring; 5) construction of reinforced concrete wave wall, 5,000 feet in length; 6) construction of roadway and crib block retaining wall each approximately 5,200 feet long together with associated drainage works. Documents may be purchased for U.S.$56 per set from Eric Silva, Senior Designing Engineer, c/o Maritime Services Board of N.S.W., Box 32 G.P.O., Sydney, N.S.W. 2001. Bids due at 2 p.m., Dec. 14, at the Maritime Services Board of N.S.W., Head Office, Circular Quay, W. Sydney.

BOLIVIA—The Bolivian National Telecommunications Enterprise, ENTEL, has extended the deadline on Tender No. 5-70 from Nov. 23-Nov. 30. (See *International Commerce*, Oct. 5, p. 51 and *Commerce Business Daily*, Sept. 29, p. 14.)

PANAMA—Bid 353, requesting proposals for the supply of electric power line construction materials has been published. A World Bank loan is available to finance procurement for the project. Bids due at 10 a.m., Nov. 17. Contract documents and specifications may be consulted at the Panamanian Embassy in Washington, D.C. A complete set is available for $5 from the Instituto de Recursos Hidraulicos y Electrificacion, Apartado Postal 5285, Panama 5.

PANAMA—The Instituto De Recursos Hidraulicos y Electrificacion, IRHE, published Tender No. 257 for construction of Bayano Hydroelectric Project including civil works, main and secondary dams, power plant and substation. IBRD financing. Bid deadline Jan. 28. Documents, maps, specifications and proposal forms available for inspection at Stone & Webster Overseas Consultants, 90 Broad St., New York or the Panamainian Embassy, Washington, D.C. Complete set may be obtained for U.S.$100 from IRHE, P.O. Box 5285, Panama 5.

PARAGUAY — The National Electric Power Administration issued Tender ANDE-IDB, No. 22/70 for the supply of 550 distribution transformers, 10 and 25 KVA; 120 re-connectors; 12 fuse splitters; and 1,745 public and station lighting fixtures. Bid deadline Nov. 17. IBRD financing. Specifications may be purchased for U.S.$25 from ANDE's Procurement Dept., Calle Padre Cardozo 560, Asuncion.

PHILIPPINES — Central Luzon State

University is interested in obtaining brochures and price quotations on milk sterilizers, cheese and butter processing equipment and cooling and bottling equipment cultivators (tractor attachments); grass harvesters; grass chopping machines; poultry feeding equipment; incubators (500 to 1,000 capacity); nutrition laboratory (small); and cattle branding equipment. Products for use in an agricultural training project sponsored by UNESCO and financed by the UNDP. Write: Central Luzon State University, Munoz, Nueva Ecija, Philippines, Attn: Dr. K. A. Alim.

SWAZILAND — Interest is sought on construction of a hotel at the site of a proposed international airport in Swaziland. The airport is the subject of a study conducted by the International Civil Aviation Organization under the sponsorship of the UN Development Program. Write: Shisayi Nxumale, Minister of Commerce, Industry & Mines, Mbabane, Swaziland.

THAILAND—Bids for scientific and laboratory equipment are sought for improving vocational education including: microscope slides, germinator and soil testers, thermometers, distilling apparatus, refractometers, PH meters, centrifuges, calorimeters, photometers, lens, galvanometers, ammeters, voltmeters, transformers, dynamo-motors, hydrometers, manometers, demonstration motors, hand trucks, heaters, and many other items. Tender No. LIVE-19; bid deadline Dec. 21. Bidder must have properly authorized agency representative in Thailand and may bid on any or all items. Write: Dir. Gen., Dept. of Vocational Education, Ministry of Education, Bangkok. Terms and specifications available on loan from Scientific & Business Equip. Div., BDC-653, Dept. of Commerce, Washington, D.C. 20230 ★(202-967-2939). Review copy available at the Commerce Field Office, 11444 Federal Bldg., 450 Golden Gate Ave., San Francisco, 94102 (415-556-5868).

THAILAND—Bids are invited on equipment for a project to improve vocational education including: electric measuring equipment such as voltmeters, ammeters, millivoltmeters, microammeters, etc.; machine shop equipment such as lathes, band saws, vises, milling and drilling machines, polishers, etc.; manual and magnetic starters, optical instruments, electric arc welding and spray painting equipment, air compressors, testing equipment, typewriters, hand fire extinguishers, motion picture film and slide reproducer, 16 mm. movie camera, etc. Tender No. LIVE-17; bid deadline Nov. 27. Bids may be submitted for any or all items. Bidder must have a properly authorized agency representative in Thailand. A loan has been secured from the World Bank equivalent to U.S. $6 million. Bids are invited by, and tender documents are available from: Dept. of Vocational Education, Ministry of Education, Bangkok. A review copy of terms and specifications is available for inspection, not for loan, at the Scientific & Business Equip. Div., Room 4120, BDC, U.S. Dept. of Commerce, Washington, D.C. 20230 (202-967-2939). A review copy is available at the Dept. of Commerce Field Office, 11444 Federal Bldg., 450 Golden Gate Ave., San Francisco, Calif. 94102 (415-556-5868).

WEST INDIES — Telecommunications, electronic and electrical equipment firm is interested in expanding its electronics assembly operations and desires to establish contacts with principals of U.S. electronics manufacturers which might be interested in sub-contracting wiring harnesses or electrical/electronic or mechanical assembly work. The company supplies, installs and services VHF telephone and traffic-control equipment, assembles electric light meters and maintains workshops for these services. Write: Edgar H. Borde, Mng. Dir., Edgar H. Borde Ltd., 62 Sackville St, Port-of-Spain, Trinidad, W.I. WTD 7/70

VENEZUELA—International bidding on the construction of a new international airport at Maiquetia has been opened. Bid numbers L-70-MIQ-1 and L-70-MIQ-2; due Dec. 14, at 10 a.m. The entire project is expected to cost between Bs. 350-380 million (1 Bs. = U.S. $.22). Interested foreign firms may obtain a pamphlet indicating details of the project at the Venezuelan Embassy, Washington, D.C. or through a Venezuelan consulate. The project includes preliminary works such as demolition, paving, and rerouting Las Pailas Cut. Foreign firms interested in participating and obtaining complete details on how to bid must state their interest in a letter with a Bs.1.00 fiscal stamp to: Oficina Ministerial del Aeropuerto de Maiquetia, Zona Rental, Plaza Venezuela, Caracas.

Future Construction Abroad

To alert U.S. firms to potential exports in foreign construction and expansion projects, U.S. Foreign Service Officers report as soon as possible project preliminary plans and progress.

ALGERIA—The project by SONIC, the Algerian State Cellulose Monopoly, to build a **eucalyptus pulp factory** is still in the planning stage. It will be designed to manufacture 100,000 tons of kraft paper per year and will be built at La Calle in Eastern Algeria. SONIC may be issuing a call for tenders soon.

ARGENTINA—Based on a five-year **$650 million railroad investment program**, the Argentine State Railways Administration, EFA, is planning to solicit bids on portions of the work outlined in the plan, which will be financed by the World Bank and open to international competition. The first call for bids is November, and will include rehabilitation and renovation of 800 km. of line on several main railway lines and is of interest to U.S. construction groups active in making maintenance-of-way, signaling and traffic control equipment. The second call for bids will concern the purchase of 100 diesel switching locomotives and will be made soon. A third portion includes consolidation of 25 existing railway shops into 10-15 efficient and modern units. New railway equipment from turret lathes and drill presses to wheel grinders and sophisticated testing and measuring instruments will be needed. Contact the State Railways Administration.

AUSTRALIA—General Motors-Holden's plans to spend over $10 million on **expansion of auto facilities** in Victoria and South Australia. Construction has started on a $3.7 million extension of the group's hardware manufacturing facilities at Elizabeth, S.A. and a $1.5 million complex at Dandenong, Vic, for Nasco GM-H's parts and accessories division. GM-H also intends to expand press shop facilities at Elizabeth at a cost of $5 million, to raise capacity to over 200,000 car sets yearly.

BAHRAIN—The Bahrain Chamber of Commerce and Industry has advised that the last date for forwarding proposals for the **building complex in center capital** Manama (See *International Commerce*, Sept. 21 and *Commerce Business Daily*, Sept. 16), has been extended to Nov. 30.

BRAZIL—The Deliberative Council of the Superintendency for Northeast Development, SUDENE has approved the **Caraiba Metais Copper Mining Project** (See *International Commerce*, Oct. 20, 1969.) The project, estimated to involve U.S.$97.7 million, is the largest SUDENE undertaking.

BRAZIL—Bids for **construction of the first 400 meters of quay** for Belem's new port at Caratateua have been opened and construction will begin shortly. The quay will be increased 1,200 meters, constructed in three 400-meter stages. After the first stage is finished, expected by March 1971, bids will be requested for construction of warehouses including freezing-rooms, electric systems, dock railway, installation of heavy duty cranes and other dock operating equipment. Contact Diretoria de Portos, Departamento Nacional de Portos e Vias Navegaveis (DNPVN), Ministerio dos Transportes, Rio de Janeiro, Guanabara, Brazil.

CANADA—Texaco Canada Ltd. reportedly plans to build a **major refinery** at Walpole (near Hamilton), Ontario. Plans for the refinery were announced in *International Commerce*, July 21, 1969, but zoning problems delayed development. Plans include a $75 million refinery with an initial capacity of 50,000 b/d but plant design will be geared for substantial expansion when warranted.

COSTA RICA—The National Water and Sewage Service (SNAA) is waiting IDB approval of a $6.5 million loan for **construction of the "5 cities" water and sewage project.** The project includes improving the sewage system in San Jose and the water and sewage systems in San Isidro de El General, Puntarenas, Limon, and Liberia with overall costs estimated at $10 million. Copies of related studies, plans, and designs may be obtained for approximately $100 for all 5 sub-projects. Contact Ing. Arturo CASTRO Figueres, Director de Ingenieria, Sistema Nacional de Aqueducto y Alcantarillado, Apartado 5120, San Jose. SNAA will divide the "5 cities" project into two phases and will solicit bids separately on each. First priority will be given to work in San Jose and in San Isidro. Concrete and clay mains will be utilized in San Jose and for sewer mains in the other sub-projects while water mains are to be iron. It is believed that the cement and clay pipes can be acquired locally but iron mains will have to be imported. Feasibility studies and other preliminary documents were compiled by a consortium of Black & Veatch of the U.S. and Aica-Sacmag of Costa Rica.

SINGAPORE—The Port of Singapore Authority (PSA) is **providing facilities for containerized shipping.** The **"East Lagoon"** complex will include a 700' feeder berth which becomes operational in late 1970; the first 1000' of container berth opens in late 1971. When the facility is completed in 1972, it will provide 2,250' of berth capable of handling two container ships simultaneously, plus a **diaphragm breakwater for protection** from monsoon sea conditions. The back-up area for the berths will include storage facilities for containers, electrical outlets for refrigerated containers, a container repair area, warehouses and transit sheds. The cost of the East Lagoon complex including container berths and back-up facilities will be S$77.6 million (U.S. $1= S$3.03). World Bank funds are being used in the financing of the complex and all contracts are awarded by international bidding. The PSA is making provisions for overland container transportation. The contract for phase one of the project was given to Dillingham-Taylor-Woodrow, an American-British joint venture, with Hawaii-based Dillingham supplying financial resources. The PSA has one Clark chain-drive straddle-carrier on order but more will be needed in the container yard.

VENEZUELA—Venezuela has authorized Bs 73 million for the construction of the **new international airport** on Margarita. Planned near Porlamar, it will be able to handle aircraft up to 747 size. Primarily a tourist airport, it is not expected to handle scheduled international traffic. There will be no facilities for poor visibility landings, heavy traffic loads, and no fuel systems installed. Earth moving has been started and the airport is scheduled to be completed within one year. Write: Ministerio de Obras Publicas, Direccion de Puertos y Aeropuertos, Zona Rental—Plaza Venezuela, Caracas.

New Trade Lists

These automated lists have been pubmerce has published the following trade lists. Copies may be obtained by firms domiciled in the United States from the Department of Commerce, BIC-924, Washington, D.C. 20230 and from Commerce Field Offices. The price is $1 per list for each country.

American Firms, Subsidiaries and Affiliates—Portugal, August 1970
American Firms, Subsidiaries and Affiliates—South Africa, September 1970

These automated lists have been published to provide complete coverage for El Salvador, Honduras and Iceland. All are dated August 1970.

El Salvador, Honduras, Iceland—Automated Business Firms

No. *Title*

00000—Business Firms—El Salvador
00000—Business Firms—Honduras
00000—Business Firms—Iceland

The following automated lists provide complete coverage for Italy. Automated trade lists may be ordered by the titles given below or by the five-digit identification number. All are dated August 1970.

Italy—Automated Lists

No. *Title*

01000—Farm, forestry, fishery products; mining companies
20000—Food, kindred products; tobacco, tobacco products
22000—Textile industry
23000—Apparel, accessories; miscellaneous fabricated textile products; personal leather products
24000—Lumber, wood products
25000—Furniture, fixtures
26000—Pulp, paper, paperboard mill products; converted paper, paperboard products; building paper, boards
27000—Printing, publishing industries
28100—Industrial chemicals
28200—Plastic materials, synthetics
28300—Drugs
28400—Soap, cleaners, toilet goods
28500—Paints, allied products; gum, wood chemicals
28700—Agricultural chemicals; miscellaneous chemical products
29000—Petroleum, petroleum products
30000—Rubber, rubber products; leather, leather products (except footwear, personal leather goods, tires, inner tubes)
30700—Plastic products
32000—Stone, clay, glass products
33000—Primary metals, metal products, ferrous, nonferrous
34100—Metal cans; cutlery, hand tools, general hardware
34300—Heating apparatus (except electric), plumbing fixtures
34400—Fabricated structural metal products; industrial fasteners; metal stamping; miscellaneous fabricated metal products
35100—Engines, turbines
35200—Farm machinery, equipment
35300—Construction, mining, materials handling machinery, equipment
35400—Machine tools; special dies, tools, jigs, fixtures, industrial molds; machine tool accessories; other metalworking machinery
35500—Food products machinery; miscellaneous special industrial machinery, nonelectrical
35520—Textile industry machinery, woodworking, paper, printing industries machinery
35600—General industrial machinery, equipment, nonelectrical
35700—Office, computing, accounting machines
35800—Service industry machinery, miscellaneous nonelectrical machinery
36100—Electrical test, distributing equipment; electrical industrial apparatus
36300—Household appliances; electronic equipment for home entertainment; phonograph records, tapes
36400—Electric lighting, wiring equipment; miscellaneous electrical equipment, supplies
36600—Commercial, industrial, military communication equipment
36700—Electronic components, accessories
37100—Automotive vehicles, parts, accessories (including auto repair shop, tires, inner tubes)
37200—Transportation equipment, parts (except automotive)
38100—Professional, scientific instruments, controlling devices
38600—Photographic equipment, supplies; watches, clocks; jewelry, silverware, plated ware
39300—Musical instruments; toys, amusements, sporting, athletic goods
39500—Pens, pencils, other office, artists' materials; costume jewelry; novelties, notions; miscellaneous manufactured products

Visiting Buyers And Officials

ARGENTINA—Enrique A. Rebora, Metalurgica Centro S.C.A., San Martin 2043, Banfield, Prov. Buenos Aires, **interested in licensing agreement for firearms.** Oct. 13 for 20 days. c/o Westward Hotel, 618 N. Central Ave., Phoenix, Ariz. 85004. Itinerary: Los Angeles, Phoenix. WTD in prep.

BELGIUM—A. Voeikoff, owner, Au Feu de Camp, 38 rue Vilain XIII, Brussels 1050, **interested in small retail private stores or chains.** Nov. 3 for 16 days. c/o Los Angeles Hilton, 930 Wilshire Blvd. Itinerary: Los Angeles, San Francisco, Miami, New York. WTD in prep.

ECUADOR—Jose R. Luces, sales rep., VICESA-Sociedad Anonima de Construcciones e Industrias, P.O. Box 459, Guayaquil, **interested in obtaining associates for his construction company and contacting firms interested in oil concessions in Ecuador.** Nov. 6 for 15 days. c/o Jose R. Luces, M.D, 2314 Glenmont Circle Apt. 206, Wheaton, Md. 20912. Itinerary: Washington, D.C., Houston, New York. WTD 9/69

HONG KONG—Clive S. Bayley, Air Fresh Foods Inc., 39A Wellington St., Hong Kong, **interested in importing luxury beef cuts, other meats; fresh canned, frozen fruit; vegetables.** Oct. 29 via Honolulu for 4 to 5 weeks. c/o Bill Larkin, 11973 E. Firestone Blvd., Norwalk, Calif. Itinerary: Honolulu, Los Angeles, Las Vegas, San Francisco. WTD 10/70.

INDIA—A. N. Amin, Comet Prints Pvt. Ltd., Anand-Sojitra Rd., Vallabh Vidya Nagar, Dist. Kaira, Gujarat, **interested in obtaining U.S. participation to make printing ink.** Oct. 31 via New York for 6-8 weeks. c/o N. N. Amin, 26 Galston Dr. R. R. 4, Trenton, N.J. 08691. Itinerary: Buffalo, New York, Detroit, Chicago, Cleveland. WTD in preparation.

NETHERLANDS—J. D. Beltman, Manager New Products Div., Honig's Merkartikelen, N.V., Koog aan de Zaan, **interested in purchasing and acquiring licensing rights for producing canned and dehydrated soups and soup additives; preprocessed meals; cereals; desserts; bakery products.** Oct. 10 for 4 weeks. c/o Dept. of Commerce Field Office, New York. Itinerary: New York, Chicago. WTD 9/70.

NETHERLANDS—J. S. Boot, J. S. Boot, 41 Sophialaan, Baarn, **interested in cooking utensils for outdoor preparation of gourmant foods and beverages.** Oct. 13 for 4 weeks. c/o Netherlands Chamber of Commerce, 10 Rockefeller Plaza, New York. Itinerary: New York, San Francisco, Los Angeles, Dallas, Chicago. WTD in prep.

International Business Reports

Statistical Yearbook 1968. **UNESCO. 551 pp. $30.**

This is the latest edition of a publication that provides data from over 200 countries and territories on population, education, science and technology, libraries and museums, book production, newspapers and other periodicals, paper consumption, film and cinema, radio broadcasting and television. Statistics on science and technology are included for the first time, based on a worldwide survey of scientific and technical manpower and expenditure for research and experimental development.

Write: UNIPUB, Inc., P.O. Box 433, New York, N.Y. 10016.

International Trade and Investment in the 70's. **Chamber of Commerce of the United States. 13 pp. $2.**

In this booklet John E. Field of the Fairchild Camera and Instrument Corp. discusses the opportunity for continued leadership by the United States in promoting international trade and emphasizes the role which American business and labor can play in that process. Also, Nathaniel Goldfinger of the AFL-CIO argues that operations of U.S.-based multinational companies have adversely affected the U.S. trade position and should be regulated by the U.S. Government.

Write: International Group, Chamber of Commerce of the United States, 1615 H St. NW., Washington, D.C. 20006.

Economic Survey of Latin America, 1967. **United Nations, New York. 240 pp. $3.50.**

The major economic and social trends in the Latin American countries for 1967 are examined. The discussion includes foreign trade and balance of payments and recent changes in tax financing. The second section of the report details these general trends by country and by sectors of activity.

Write: Sales Section, United Nations, New York, N.Y. 10017.

Commercial Correspondence in Four Languages. **By H. E. Horten. Distributed by Lenarth's, Pasadena, Cal. 316 pp. $15.75.**

Especially designed for exporters and importers, this book contains the basic phrases and forms used in commercial correspondence, and supposedly enables a businessman to compose a letter in English, French, German or Spanish. **Write:** Lenarth's, 1115 Mar Vista Ave., Pasadena, Cal. 91104

Analytical Bibliography — Market Surveys by Products and Countries. **International Trade Center, UNCTAD/GATT, Geneva. 203 pp. $5.**

This international bibliography lists and describes market studies prepared by private and public organizations since 1964. The first section contains market and marketing studies for some 50 categories of products, and the second section is a regional and country listing of 747 studies of the characteristics of national and regional markets.

Write: UNIPUB, Inc., P.O. Box 433, New York, N.Y. 10016.

Calendar For World Traders

Nov. 5—Bay Saint Louis, Miss.—International Trade Seminar, St. Augustine Seminary, 9 a.m. Sponsors: Louisiana-Mississippi REEC, New Orleans Field Office.

Nov. 9—Jacksonville—Seventh annual export trade seminar, Wolfson Student Center, Jacksonville U. Sponsors: REEC, Chamber of Commerce, Field Office.

Nov. 10 — Kansas City — Export meeting on trade with East Africa, Top-Of-The-Tower Restaurant, Commerce Tower, 6 p.m. Sponsors: International Trade Club, REEC, Field Office.

Nov. 10 & 17—Detroit—Export workshops, Commerce Field Office, 10 a.m.

Nov. 11—Louisville—21st Kentucky World Trade Conference, Brown Hotel. Sponsors: U. of Louisville, Field Office.

Nov. 11 & 18—Cincinnati—Export trade workshops, U. of Cincinnati. Sponsors: REEC, World Trade Club, Field Office.

Nov. 12—Kansas City—Export Financing Seminar, 1840 Federal Bldg. 2 p.m. Sponsors: REEC, Field Office.

Nov. 13—New York—Annual meeting of the Foreign Credit Interchange Bureau's Drug Chemical and Food Export Club, Alameda Room, Great Northern Hotel, 6 p.m.

Nov. 17—New York—Dinner meeting of the Foreign Credit Interchange Bureau's Publishers Export Credit Group, Advertising Club, 4 p.m.

Nov. 18—Lincoln, Neb.—Export development seminar (9:30 a.m.) and export documentation workshop (2 p.m.), Chamber of Commerce headquarters.

Nov. 18—Memphis—International Marketing Seminar, Downtowner Motor Inn. Sponsors: Mid-South Exporters' Roundtable, Chamber of Commerce, REEC.

Nov. 19 — Little Rock — Export forum on East-West trade, Coachman's Inn. Sponsors: Arkansas Exporters' Roundtable, REEC, Memphis Field Office.

Nov. 19—Omaha—Export development seminar (9:30 a.m.) and export documentation workshop (2 p.m.), Chamber of Commerce headquarters.

New Publications

When ordering any publication, indicate title and series designation, if indicated, and make checks or money orders payable to the Superintendent of Documents. Orders should be sent to the U.S. Department of Commerce, Washington, D.C. 20230, or to any of its field offices.

OFFICE OF THE SECRETARY

Commerce Technical Advisory Board

Financing new technological enterprise. A report of the Panel on Venture capital. September 1970. 28 pp. 50¢. This report examines the problems associated with acquiring venture capital, particularly those relating to new technology-oriented businesses, and recommends steps to improve venture capital flow.

Office of Minority Business Enterprise

OMBE outlook. September 1970. 12 pp. Free upon request. Information on the programs and activities of OMBE and others engaged in furthering business opportunities for minority group members.

BUREAU OF DOMESTIC COMMERCE

Special Publication

A guide to civil defense management in the aluminum industry. August 1970. 56 pp. Free upon request. Issued jointly by Department of Commerce, Department of Defense, Office of Civil Defense.

Periodical

Marketing information guide. A monthly annotated bibliography of 200 business titles. October 1970. Vol. 17, No. 10. Annual subscription $4.50 ($1.25 additional for foreign mailing). Single copy 40¢.

BUREAU OF INTERNATIONAL COMMERCE

International Marketing Information Service

Exhibitor's Export Market Guides

Scandinavian imports of U.S. electronic components up 35% in booming market (IMIS 70-37). August 1970. 12 pp. 10¢.

U.S. dairy processing machinery needed to satisfy rising Italian market demand (IMIS 70-48). September 1970. 4 pp. 10¢.

Export Control

Export Control Bulletin—supplement to export control regulations. Number 29. Oct. 9, 1970. 25¢. Subjects: revision of commodity control list and revision of denial and probation orders.

Overseas Business Reports

Annual subscription $16 ($5 additional for foreign mailing). Single copy 15¢ unless otherwise indicated.

Establishing a business in the Federal Republic of Germany and West Berlin (OBR 70-44). September. 24 pp.

U.S. foreign trade by quarters: April-June 1968, April-June 1970 (OBR 70-48). September. 28 pp.

Foreign Economic Trends

Annual subscription, $15 ($6 additional for foreign mailing). Single copy, 10¢.

Republic of China (ET 70-94). Sept. 1. 12 pp.; **Australia** (ET 70-97). Sept. 9. 12 pp.; **Belgium** (ET 70-98). Sept. 9. 12 pp.; **Libya** (ET 70-99). Sept. 7. 16 pp.; **Ceylon** (ET 70-100). Sept. 10. 4 pp.; **Uruguay** (ET 70-101). Sept. 14. 8 pp; **Paraguay** (ET 70-102). Sept. 21. 12 pp.

ECONOMIC AFFAIRS

Office of Business Economics

Survey of current business. September. Vol. 50, No. 9. Annual subscription, including weekly statistical supplement, $9 ($3.75 additional for foreign mailing). Single copy, $1.

BUREAU OF THE CENSUS

Periodicals

Business Conditions Digest. September. Data through August. Series ES1, No. 70-9. Annual subscription, including supplements, $16 ($4 additional for foreign mailing). Single issue, $1.50. This monthly report brings together many of the economic time series found most useful by business analysts and forecasters.

Defense Indicators. September. Series ES4, No. 70-9. Annual subscription $4.50 ($1.25 additional for foreign mailing). Single copy 45¢. This monthly report brings together the principal time series on defense activity which influence short-term changes in the national economy.

Census Use Study

Area travel survey: report no. 11. September. 52 pp. 50¢. A description of a sample survey conducted to augment the New Haven special census data with basic data for use in transportation planning.

Agriculture

Report on cotton ginnings prior to October 1 for the crop of 1970, by States (A10: 70-5). Oct. 8. 1p. 10¢.

Construction and Housing

Authorized construction — Washington, D.C. area. August 1970 (C41-70-8). September 1970. 4 pp. Annual subscription $1. Single copy, 10¢.

Residential alterations and repairs—expenditures on residential additions, alterations, maintenance and repairs, and replacements: first quarter 1970 (C50-70-Q1). September. Annual subscription, including two-part annual report, $1.50. Single copy, 25¢.

Housing starts: August 1970 (C20-70-8). September. Annual subscription $1.50. Single copy, 15¢.

1967 Census of Construction Industries

Area Statistics—Final Reports

Louisiana (CC67-A-20). Sept. 28 pp. 35¢.
Mississippi (CC67-A-26). Sept. 28 pp. 35¢.
Missouri (CC67-A-27). Sept. 28 pp. 35¢.

Industry Statistics—Final Reports

United States Summary. Part A—Statistics for all construction establishments (CC67-1-1A). September. 24 pp. 35¢.

United States Summary. Part B—Statistics for all construction firms with payroll (CC67-1-1B). Sept. 32 pp. 35¢.

Current Housing Report

Housing vacancies. Vacancy rates and characteristics of housing in the United States: annual statistics 1969 (Series H-111, No. 59, Part II). October. Annual subscription (Series H-111 and H-121, combined) $1.50 (50¢ additional for foreign mailing). Single copy 20¢.

1970 Census of Housing

Housing Unit Counts for States—Preliminary Reports for:

District of Columbia (HC(P1)-10). September. 1 p. 10¢.
Georgia (HC(P1)-12). August. 2pp. 10¢.
Virgin Islands of the United States (HC (P1)-55). October 1. 2pp. 10¢.

General Housing Characteristics—Advance Reports

Montana (HC(V1)-28. Sept. 12 pp. 30¢.
Wyoming (HC(V1)-52). Sept. 8 pp. 30¢.

Distribution and Services

Weekly retail sales. Estimated weekly retail sales of retail stores in the United States week ending Oct. 3 (CB 70-366). Oct. 8. 2 pp. 10¢.

Weekly retail sales. Estimated weekly retail sales of retail stores in the United States week ending Oc. 10 (CB 70-367). Oct. 15. 2 pp. 10¢.

Monthly selected services receipts: August (BS70-8). Oct. 14. Annual subscription $1. Single copy 10¢.

Monthly wholesale trade report: August (CB-70-371). 2 pp. 10¢.

1967 Census of Business

Merchandise Line Sales—Retail Trade: **New Mexico** (BC67-MLS-33). September. 62 pp. 60¢. **Vermont** (BC67-MLS-47). September. 44 pp. 50¢.

The following reports contain a revision to the original reports. Each revised report is dated September.

Wholesale Trade—Change Sheets. **Illinois** (BC67-WA15); **Minnesota** (BC67-WA25); **Missouri** (BC67-WA27); **New Jersey** (BC67-WA32); **New Mexico** (BC67-WA33); **Texas** (BC67-WA45); **Wyoming** (BC67-WA52).

Retail Trade—Change Sheets. **Connecticut** (BC67-RA8); **Illinois** (BC67-RA15); **Massachusetts** (BC67-RA23); **Michigan** (BC67-RA24); **Mississippi** (BC67-RA26); **Missouri** (BC67-RA27); **Montana** (BC67-RA28); **New York** (BC67-RA34); **Oklahoma** (BC67-RA38).

Foreign Trade

U.S. general imports—cotton manufactures country and Geneva agreement category: (August) 1970 (FT 130). September. Annual sub. $1. Single issue 10¢.

U.S. trade with Puerto Rico and U.S. possessions: May 1970 (FT 800). September. Annual subscription $2.50 (75¢ additional for foreign mailing). Single copy 20¢.

Customs district by continent: calendar year 1969 (FT 986). Sept. 30. Annual subscription (FT 900, 975, 985, and 986 combined) $3. Single copy 10¢.

Customs district by continent: August 1970 (FT 986). Oct. 7. Annual subscription (FT 900, 975, 985, and 986 combined) $3. Single copy 10¢.

U.S. exports—schedule B commodity and country: July 1970 (FT 410). September. Annual subscription $33 ($8.25 additional for foreign mailing). Single copy $2.75.

U.S. export and import merchandise trade: August 1970 (FT 900). Sept. 24. Annual subscription (FT 900, 975, 985, and 986 combined) $3. Single copy 10¢.

Trade area, coastal district, customs district, port of lading or unlading, and type of service: July 1970 (FT 985). Oct. 9. Annual subscription (FT 900, 975, 985, and 986 combined) $3. Single copy 10¢.

Industry

1967 Census of Manufactures

A separate report for each State and Dist. of Col. gives data for industries and industry groups on value of shipments, value added by manufacturing, employment, payrolls, man-hours, new capital expenditures, inventories, and number of manufacturing establishments. All are dated September 1970:

Alabama (MC67(3)-1). 40 pp. 40¢.
Arkansas (MC67(3)-4). 40 pp. 40¢.
Dist. of Columbia (MC67(3)-9). 20pp. 35¢.
Florida (MC67(3)-11). 44 pp. 40¢.
Georgia (MC67(3)-11). 52 pp. 50¢.
Kentucky (MC67(3)-18). 44 pp. 40¢.
Louisiana (MC67(3)-19). 36 pp. 40¢.
Maryland (MC67(3)-21). 36 pp. 40¢.
Minnesota (MC67(3)-24). 40 pp. 40¢.
Mississippi (MC67(3)-25). 36 pp. 40¢.
Missouri (MC67(3)-26). 48 pp. 45¢.
North Carolina (MC67(3)-34). 48 pp. 45¢.
Oklahoma (MC67(3)-37). 32 pp. 40¢.
South Carolina (MC67(3)-41). 36 pp. 40¢.
Tennessee (MC67(3)-43). 48 pp. 40¢.
West Virginia (MC67(3)-49). 24 pp. 40¢.

Current Industrial Reports

Salad dressing, mayonnaise, and related products: 1969 (Series: MA-20F(69)-1). Oct. 9. 2 pp. 25¢

Narrow fabrics: 1969 (Series: MA-22G(69)-1). Oct 12. 8 pp. 25¢.

Apparel survey: 1969 (Series: MA-23A-(69)-1). Oct. 6. Subscription price $1.75 per year including M23H. 25¢.

Manufacturers' shipments of office furniture: 1969, 1968 and 1967 (Series: MA-25H(69)-1). Oct. 12. 8 pp. 25¢.

Plastic bottles: summary for 1969 (Series M30E(69)-13). Oct. 9. 2 pp. 15¢ per copy, $1.50 per year.

Shoes and slippers: summary 1969 (Series M31A(69)-13). Oct. 6. 15¢ per copy, $1.50 per year.

Refractories: summary for 1969 (Series: MQ-32C(69)-5). Oct. 13. 25¢ per copy, $1 per year.

Farm machines and equipment: 1969 (Series: MA-35A(69)-1). Oct. 2. 25¢ per copy, $1 per year (including MQ-35A).

Pumps and compressors: 1969 (Series: MA-35P(69)-1). Oct. 9. 4 pp. 25¢.

Population

School enrollment: October 1969 (Series P-20, No. 206). Oct. 5. 52 pp. 50¢.

Occupation and earnings of family heads in 1969, 1965, and 1959 (Series P-60, No. 73). Sept. 30. 32 pp. 35¢.

Current Population Reports issued in Series P-20, P-23, P-25, P-26, P-27, P-28 (summaries only), P-60 and P-65 are sold as a single subscription at $14 per year ($3.50 additional for foreign mailing).

1970 Census of Population

Population Counts for Standard Metropolitan Statistical Areas—Preliminary Reports. Each of the following reports is dated September 1970, contains 2 pages, and is priced at 10¢:

Anaheim-Santa Ana-Garden Grove, Calif. (PC(P2)-9).
Bakersfield, Calif. (PC(P2)-17).
Dayton, Ohio (PC(P2)-50).
Fresno, Calif. (PC(P2)-71).
Los Angeles-Long Beach, Calif. (PC(P2)-112).
Oxnard-Ventura, Calif. (PC(P2)-149).
Reading, Pa. (PC(P2)-165).
Sacramento, Calif. (PC(P2)-171).
Salinas-Monterey, Calif. (PC(P2)-176).
San Bernardino-Riverside-Ontario, Calif. (PC(P2)-180).
San Diego, Calif. (PC(P2)-180).
San Francisco-Oakland, Calif. (PC(P2)-182).
San Jose, Calif. (PC(P2)-183).
Santa Barbara, Calif. (PC(P2)-184).
Scranton, Pa. (PC(P2)-186).
Springfield, Ill. (PC(P2)-194).
Stockton, Calif. (PC(P2)-200).
Vallejo-Napa, Calif. (PC(P2)-215).
Wilkes-Barre-Hazelton, Pa. (PC(P2)-225).

Population Counts for States—Preliminary Reports

California (PC(P1)-6). Sept. 4 pp. 10¢.
Colorado (PC(P1)-7). Oct. 4 pp. 10¢.
Dist. of Columbia (PC(P1)-10). 2 pp. 10¢.
Illinois (PC(P1)-15). Oct. 8 pp. 10¢.
Ohio (PC(P1)-37). Sept. 6 pp. 10¢.
Pennsylvania (PC(P1)-40). Oct. 24pp. 10¢.

ECONOMIC DEVELOPMENT

Economic development. October. Vol. 7, No. 10. Subscription, $1.50 (50¢ more for foreign mailing). Single copy, 15¢.

SCIENCE AND TECHNOLOGY

National Oceanic and Atmospheric Admin.

Project Stormfury. Annual report 1969. May 1970. 128pp. Issued jointly by U.S. Department of the Navy and U.S. Department of Commerce. Available from National Hurricane Research Laboratory, P.O. Box 8265, University of Miami Branch, Coral Gables, Florida 33124 or U.S. Naval Weather Service Command, Department of the Navy, Washington Navy Yard, Washington, D.C. 20390.

Ionospheric predictions for January 1971. October. Number 94. Annual subscription, $4 ($1 additional for foreign mailing). Single copy, 35¢. Issued monthly to aid in determining best skywave frequencies.

Monthly climatic data for the world. February. Volume 23, No. 2. Annual subscription $2.75 ($1 additional for foreign mailing). Single copy 25¢.

Probable maximum precipitation, Mekong River Basin (Hydrometeorological report no. 46). May. 162 pp. $1.25. Issued jointly by Department of Commerce and Army Corps of Engineers.

Earthquake information bulletin. Sept.-Oct. 1970. Vol. 2, No. 5. Annual subscription, $1.50 (50¢ additional for foreign mailing). Single copy 30¢.

Ocean survey ship Researcher OSS 03. October. 6 pp. Free upon request.

Preliminary determination of epicenters, June 1970. October. 8 pp. Annual subscription, $1.50 (50¢ additional for foreign mailing). Single copy, 15¢. These reports list the approximate locations of earthquakes anywhere in the world, with origin time, latitude, longitude, region of occurrence, depth, magnitude, and, when available, comments on damage and casualties and miscellaneous information.

A survey and analysis of normal ionospheric absorption measurements obtained from radio pulse reflections (ESSA Professional Paper 4). September. 42 pp. 45¢. Analyzes seasonal and solar cycle variation of ionospheric absorption at Slough, Freiburg, Singapore, and Dakar.

National Bureau of Standards

Research materials developed under the NBS inorganic materials program (NBS Spec. Publ. 333). September. 71 pp. 70¢. A brief summary of the nature, method of preparation and properties determined for each material (gases, liquids, glasses, single crystals, polycrystals and various multiphase materials).

Rigid poly (vinyl chloride) (PVC) profile extrusions (PS 26-70). October. 7 pp. 10¢. Establishes requirements for the material and properties.

Photonuclear reactions (NBS Monograph 118). August. 46 pp. 50¢. This paper reviews photonuclear reactions in the approximate energy range 10 to 30 MeV.

Annotated accession lists of data compilations of the NBS Office of Standard Reference Data (NBS Tech. Note 554). September. 196 pp. $1.50.

Development and Current status of the standard nuclear instrument module (NIM) system (NBS Tech. Note 556). October. 15 pp. 30¢. The standard nuclear instrument module (NIM) system described in AEC Report TID-20893 is widely used throughout the world.

NATIONAL TECHNICAL INFORMATION SERVICE

Order the following reports on Government-sponsored research from: National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22151. Make check or money order payable to National Technical Information Service. Price for each document is $3 (microfiche 65¢) unless otherwise specified.

Proceedings of the conference on image storage and transmission systems for libraries (PB-193 692). National Bureau of Standards, Gaithersburg, Md., Sept., 316 pp. Proceedings of conference held December 1-2, 1969 at Gaithersburg, Maryland. Papers cover techniques for image storage and transmission, including automated storage and retrieval of microforms and ultra-microforms and new developments in graphic and facsimile transmission.

Compilation of major recommendations from five studies relating to national scientific and technical information systems (CH-SAM-927). Science Communication, Inc., McLean, Va., for the National Science Foundation, April. 147 pp.

Long-term effects of air pollution—a survey (PB-193 801). Center for the Environment and Man, Inc., Hartford, Conn., for the National Air Pollution Control Admin., June, 50 pp. Discusses the emission and role of major pollutants in the atmosphere.

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